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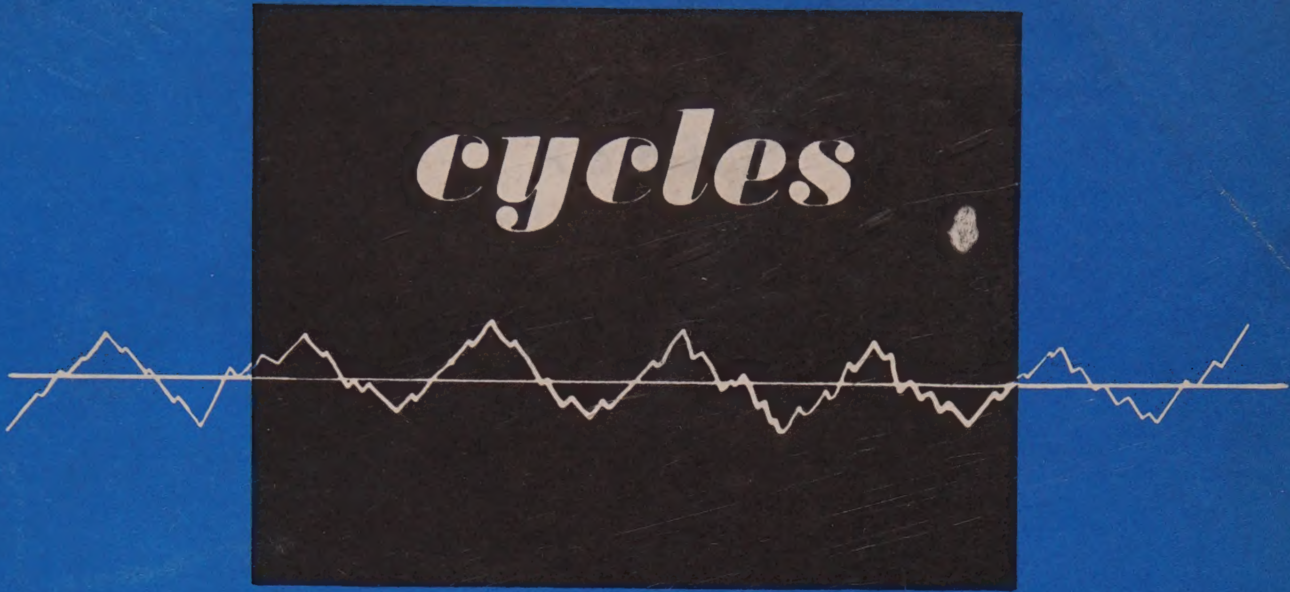

October 1958

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THE OFFICIAL BULLETIN OF THE FOUNDATION FOR THE STUDY OF CYCLES

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INDEX

BY DEPARTMENT

Page

- Chapter Affairs 268
  - New York
  - Washington, D. C.
- Cycle Round-Up for October 271
  - Round-Up Gives Latest Figures on:
    - Aluminum Production
    - Automobile Production
    - Bond Yields
    - Copper Prices
    - Corn Prices
    - Egg Prices
    - Liabilities of Failures
    - Oats Prices
    - Residential Building Construction
    - Stock Prices
    - Sunspot Numbers
    - Wheat Prices
    - Unemployment
- Director's Letter. 251
- Geisinger Indicator
  - Forecast 277
  - How Good Is It? 253
- Letters 269
  - Cycles in Stocks; Cycles in Sea Water Temperatures; The Golden Mean
- Questions and Answers
  - Standard & Poor's Corp. Stock Price Index. 260
- Research by Others
  - Sunspot – Climate Relationships. . . 266
- Research by Staff
  - The 9-Year Cycle in Presbyterian Church Membership 261
  - The 17-Week Cycle in Industrial Stock Prices—Continued 263

BY SUBJECT

- Business
  - Aluminum Production 271
  - Automobile Production 271
  - Industrial Production 277
  - Residential Building Contracts . . . 272
  - Unemployment 271
- Commodity Prices
  - Copper Prices. 276
  - Corn Prices 272
  - Egg Prices 274
  - Oats Prices 271
  - Wheat Prices 271
- Finance
  - Bond Yields 271
  - Liabilities of Failures 273
  - Stock Prices 260, 263, 269, 271
- General
  - The Golden Mean 269
- Natural Science
  - Sea Water Temperature 270
  - Sunspot – Climate Relationships . . 266
  - Sunspot Numbers 271
- Sociology
  - Church Membership 261

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THE DIRECTOR'S LETTER

Dear Member:

We are pulled, like a worm between two chickens, by two schools of thought.

Our scientist friends deplore anything that even smells of business forecasting. And as for stock market forecasting, they shudder at the very thought.

On the other hand our lay members are chiefly interested in knowing what's ahead, although most of them would not go as far as the man who wrote, "Give us more forecasts, even if wrong!"

To keep both groups happy we have to hew pretty close to a line The line is this: We gather facts that are used by *others* in forecasting business and a variety of other phenomena; we ourselves studiously avoid making forecasts. It seems to us that forecasting is a matter of *opinion*; that our province should be the determination of *fact*. We try to make this difference plain to all concerned at every opportunity.

Let me illustrate the difference by an example: A statistical analysis shows that the seasonal cycle of temperature at San Francisco is such and such; and that if past patterns continue, the odds are 3 to 2 that September of any year will be the hottest month of that year. This information is purely *factual*. A *forecast* would concern itself with some *particular* September and would be a matter of *opinion*.

As you may or may not know, our program is as follows:

Our Program

(1) we collect as many examples as possible of rhythmic fluctuation in all fields of natural and social science, (2) we measure each of these rhythms with the greatest possible accuracy, (3) we record the latitude, longitude, wave length, wave shape, timing, and strength of each cycle in such a way that any qualified worker can reproduce the work and obtain the same results: and so that anyone can, if he wishes, take issue with the methods used by the worker to isolate, definitize, and evaluate the cycle, (4) we stimulate and help others to do these same things, (5) we print the results of all this research, (6) we arrange, collect, catalog, and group the cycles thus discovered and definitized, (7) we try to discover the laws which govern the operation of cycles, and (8) we hope to deduce the cause or causes of cycles.

It is true that we have collected, measured, and recorded more cycles in the field of economics than, at first glance, the subject would warrant, but there are good reasons for this course of action. One reason is the practical one that the economic cycles are of more interest to our lay members than the natural science cycles--and all our funds for research come from these lay members. However, quite aside from practical considerations, there are good scientific reasons for concentrating, in the first instance, on economic time series: First of all, economic time series are more numerous, more accessible, and with a few exceptions, usually available over longer periods of time than natural science figures. Second, economic time series are usually available on a monthly or even a weekly or daily basis. This makes it possible to measure their cycles with much more exactness. Third, the cycles in economic time series are usually simpler than those in natural science figures. In a subject as complex as cycles it is well to start the study at the place of greatest possible progress.

To repeat, our policy is this: To gather facts that are used by others in forecasting business and a variety of other phenomena; to studiously avoid making forecasts ourselves.

The Geisinger Indicator

A partial exception to the above policy is found in the Geisinger Indicator. This Indicator has nothing to do with cycles, hence its failure can not bring discredit upon the subject of cycles, or upon the scientists who give moral support to our activities. The Indicator is published merely as a side line of possible interest and value to our members.

Even here we try to keep pretty much away from opinion. We try to limit ourselves to fact. The Indicator stands on its own feet. In the past, ever since World War II and its aftermath, moves of business have always followed Geisinger Indicator values of plus two or minus two. We can hope that what has happened in the past will continue.

The record of the Geisinger Indicator has been truly remarkable. It is set forth in detail in the lead article for this issue.

The Scientists Position

The scientists' objection to forecasting is not an objection to forecasting as such. It is the business of science to forecast. Their objection is based upon the belief that business forecasting is impossible, in the present state of our knowledge.

For example, Professor Arthur F. Burns of Columbia University, the National Bureau of Economic Research, and the President's Council of Economic Advisors says, "Economists have not yet evolved, if they ever will, a technique for making dependable forecasts."

John Jewkes, Professor of Social Economics at Manchester University, England says, "It cannot be too strongly emphasized that there is nothing in economic science which enables us to foretell events...There is nothing in history to suggest that the expected will normally happen...Economic prediction as a scientific method is...absurb, because impossible..."

What applies to business forecasting applies with ten times greater force to stock market forecasting. There are so few people who know what the stock market is going to do that the services which purport to are known to the trade as "swindle sheets." They are well named.

You can see why the scientists (and I) shy away!

On the other hand people *must* make business forecasts; people *do* make money in the stock market. And a knowledge of cycles, although it is not the whole story, *does* help. One man put it very well, I think, when he wrote, "Cycles should be used to combat tendencies toward unbridled enthusiasm or utter skepticism, not as market predictors. Their value is in the order of 10% in such use with 90% reserved for basic economic facts. If this were not so, life would be just too easy and we could all get on the band wagon, in which case there would be no advantage in hard work and research."

I myself would put the percentages more favorable to cycles, but I fully agree with the general idea.

Cordially yours,

Edward R. Dew

Director

Printers and Typographical Experts—Attention; In the past we have used throughout the magazine 10 point type set 6.6 lines per inch. For an example see pages 269 and 270 of this issue.

We have been playing with the idea of larger type. This page for instance is printed in 11 point, set 6 lines to the inch.

What are your recommendations for the future?

We would also like the reaction of our general readers. *E.R.D.*

The Geisinger Indicator

HOW GOOD IS IT?

How good is the Geisinger Indicator?

The answer is, *very* good!

Before I go into detail, let me remind you that, for your benefit, we publish three indicators: (1) The Geisinger Indicator, (2) The First Difference Indicator, and (3) the sum of these two, The Modified Geisinger Indicator.

The Geisinger Indicator Best

The Geisinger Indicator generally turns about 9 months before the corresponding turn of the Federal Reserve Board Index of Industrial Production; the Modified Geisinger Indicator generally turns about 8 months before. From these facts we get light on the probable future behavior of the Index of Industrial Production.

The Index of Industrial Production is a measure of the *physical* production of things. It represents the relative number, tons, barrels, yards, gallons, and square feet of things produced in the month. It has nothing to do with price.

The *Geisinger* Indicator is by all odds the best of these three indicators. However, the First Difference Indicator does give another approach; and, when combined with the Geisinger Indicator into the *Modified* Geisinger Indicator, it gives still a third way of looking at the future.

Superficially, the *Modified* Geisinger Indicator conforms more to what the industrial production curve is going to look like than does the Geisinger Indicator itself. However, when you *study* the two indicators you see that the Geisinger Indicator is more sensitive, more dependable, and signals the turns farther in advance than its modified counterpart.

The Geisinger Indicator is plotted as Curve A in Fig. 1 on the two pages next following.

The Signal

In the past, when the Geisinger Indicator, going up, has touched or cut plus 2 it has been a good sign, Such behavior on the part of the indicator has been followed by increased industrial production. When the Geisinger Indicator, going down, has touched or cut minus 2 it has been a bad sign. Such behavior on the part of the indicator has been followed by decreased industrial production.

Before I discuss these matters in detail I want to remind you that the Geisinger Indicator goes up and down around a horizontal zero axis. There is *no* underlying growth trend to the Geisinger Indicator.

The Growth Factor

On the other hand, industrial production *does* have an underlying growth trend. Industrial production (smoothed) is charted in Fig. 1 as Curve B. The underlying growth trend, 1947-1957, is shown by the envelope lines marked C and D. The industrial production curve with the 1947-57 trend removed is plotted as Curve E.

The fact that the present set-back is important and not a mere ripple is shown by two things: (1) The peaks of 1955 and 1956 failed to touch or even approach the upper envelope line, C. (2) The downward movement of the industrial production line has actually cut the lower envelope line, D. A new underlying trend has seemingly been inaugurated. It could last for quite a while.

The Geisinger Indicator will not go down with the new trend any more than it went up with the old one.

The Chart

Now let us see how the Geisinger Indicator has worked, 1947 to date.

I have marked off on the Geisinger Indicator all the times when the curve touched or cut the plus 2 or minus 2 values. Then I drew perpendiculars to cut the industrial production curve (B) and the industrial production curve adjusted for trend (E). When the Geisinger Indicator touched or cut the *minus* 2 value on the way down I marked a *downward* pointing arrow on the industrial production curve. When the Geisinger Indicator touched or cut the *plus* 2 values on the way up, I marked an upward pointing arrow on the industrial production curves.

The Signals

From these lines and arrows it is easy to see that the Geisinger Indicator gave signals as follows:

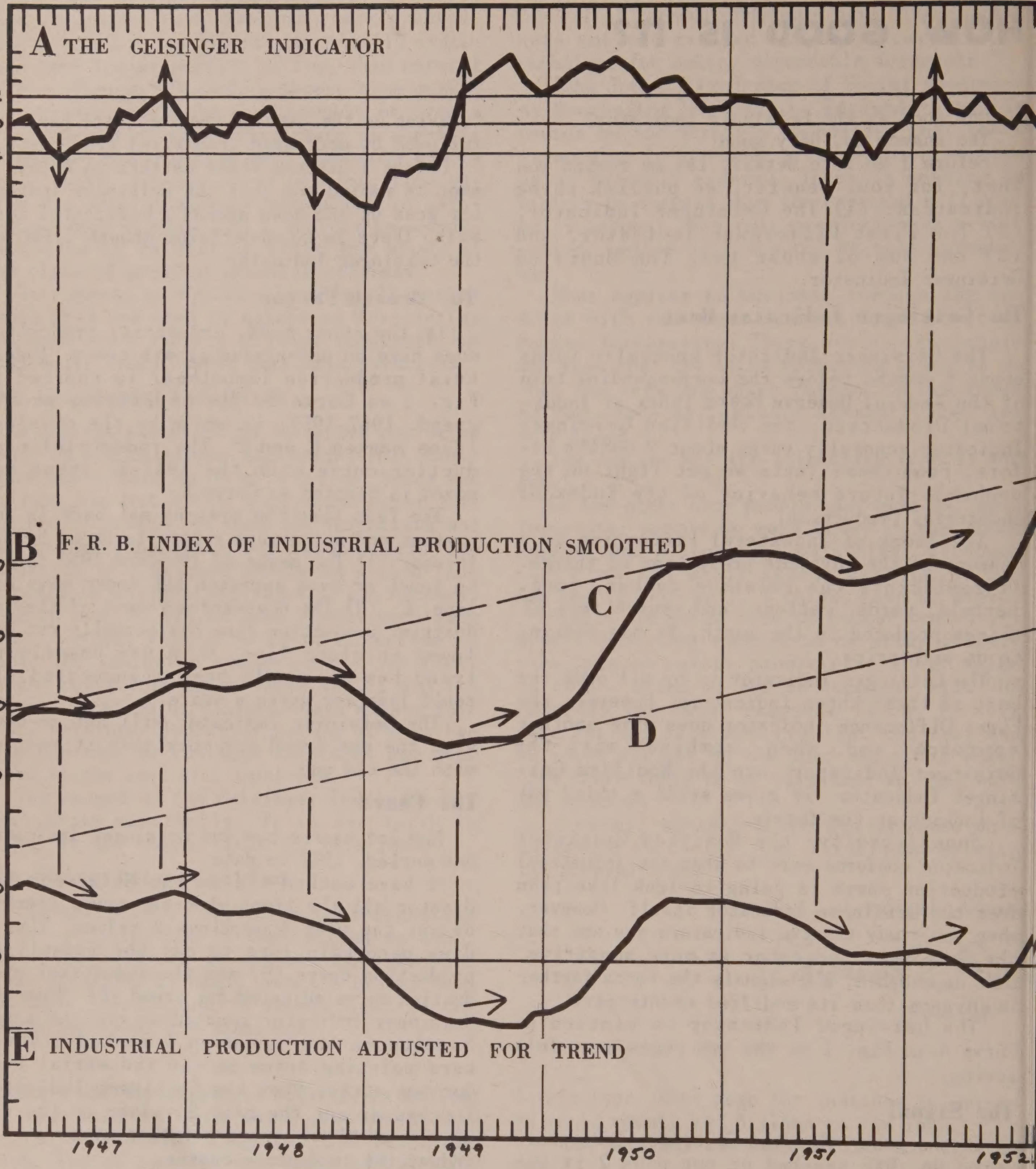
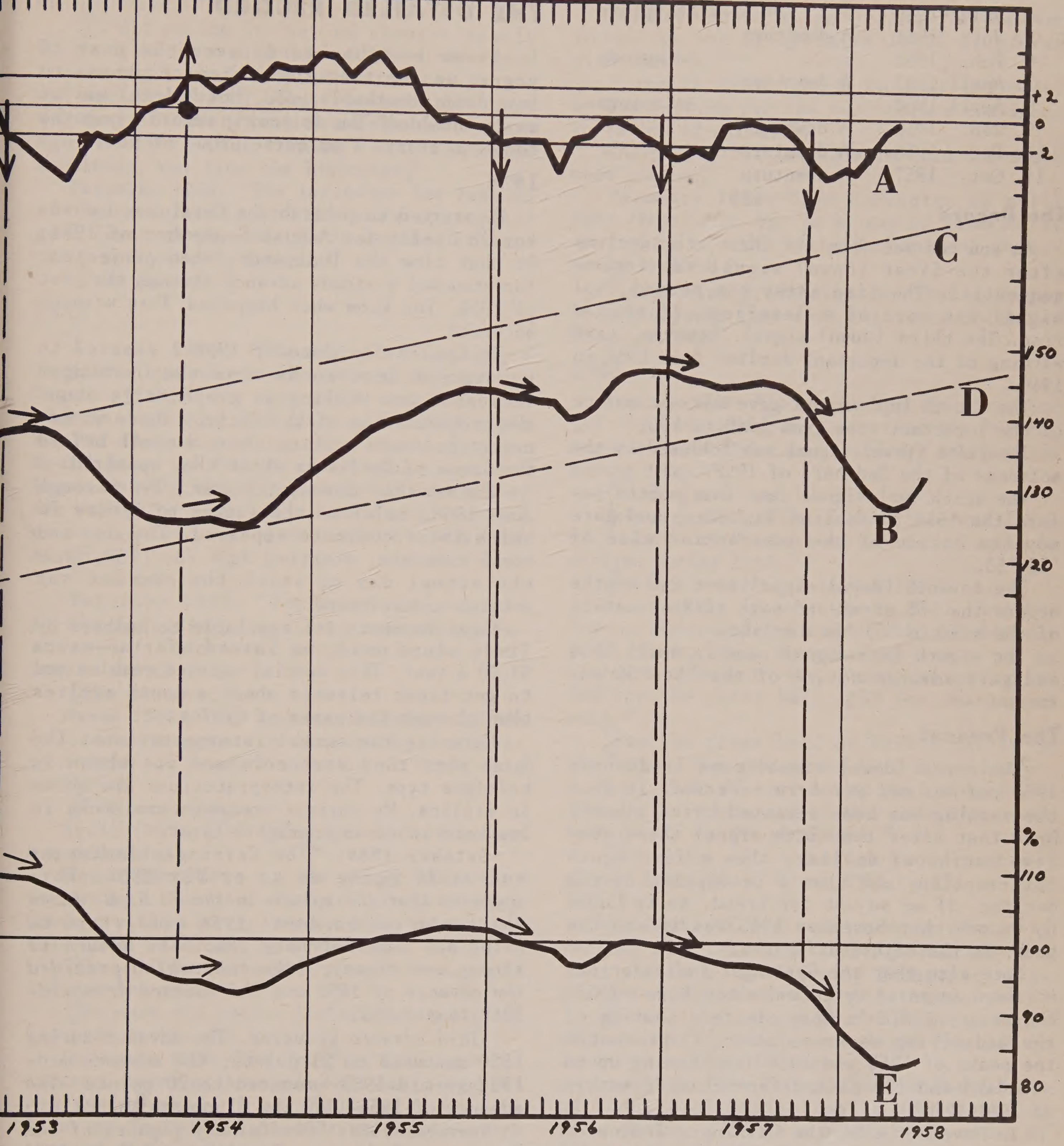


FIG. 1 THE GEISINGER INDICATOR — HOW GOOD IS IT?



+2
0
-2
A
C
150
D
140
130
B
120
%
110
100
90
80
E
1953
1954
1955
1956
1957
1958

1.	April 1947	A downturn	
2.	Nov. 1947		An upturn
3.	Sept. 1948	A downturn	
4.	July 1949		An upturn
5.	July 1951	A downturn	
6.	Feb. 1952		An upturn
7.	April 1953	A downturn	
8.	April 1954		An upturn
9.	Jan. 1956	A downturn	
10.	Dec. 1956	A downturn	
11.	Oct. 1957	A downturn	

The Record

As you can see from the chart, the decline after the first (down) signal was inconsequential. The rise after the second (up) signal was more of a leveling off than a rise. The third (down) signal, however, gave warning of the important decline from 1948 to 1949.

The fourth (up) signal gave advance notice of the important rise from 1949 to 1951.

The fifth (down) signal was followed by the softness of the 2nd half of 1952.

The sixth (up) signal came four months before the '51-'52 decline was over, and gave advance notice of the substantial rise of '52-'53.

The seventh (down) signal came two months before the '53 crest and gave advance notice of the sizable '53-'54 decline.

The eighth (up) signal came in April 1954 and gave advance notice of the '54-'56 advance.

The Present

The ninth (down) signal came in January 1956 *and has not yet been reversed.* In fact the warning has been repeated twice since!! Note that after the ninth signal there were five months of decline, then a five month interruption, and then a resumption of the decline. If we adjust for trend, as in Curve E, we see that November 1955 was indeed the peak, in the adjusted figures.

Note also that *the Geisinger Indicator has not been in positive ground since August 1955.* Who says you didn't have plenty of notice of the underlying weakness that (1) prevented the peaks of 1955 and 1956 from coming up to standard and (2) caused the actual downturn of 1957-1958?

In November 1957 the Geisinger Indicator turned up. This, as I have said elsewhere, is a good sign. It was followed six months later by a checking in the decline of industrial production. However, for my part I shall wait for the Geisinger Indicator to reach plus 2 before giving myself or anyone else a green light. In spite of the current upturn, caution is indicated.

THE DETAILED RECORD

As we look backwards over the past 10 years, we see that the indicator proves to have been remarkably good. How helpful was it as it unfolded? The following record gives the complete story. I am quite proud of it.

1954

We started to publish the Geisinger Indicator in *Cycles* for August-September of 1954. At that time the Indicator, when projected, foreshadowed a steady advance through the rest of 1954. You know what happened. This advance occurred.

In *Cycles* for October 1954 I started to try to put into words what the Geisinger Indicator was telling us graphically about the probabilities of the future. These interpretations were written about a month before the issue of *Cycles* in which they appeared.

The *monthly* dates, October 1954 through June 1956, refer to the issues of *Cycles* in which these comments appeared. The day and month comments, starting June 13, 1956, show the actual day on which the comment was written and released.

These comments are available to members by first class mail, as issued, for an extra $3.00 a year. This special service enables you to get these releases about a month earlier than through the pages of *Cycles.*

Here are the actual interpretations. The dates when they were released are shown in boldface type. The interpretations are shown in italics. My current comments are shown in brackets in roman (upright) type.

October 1954: *"The Geisinger Indicator was still going up as of May 1954. This suggests that the upturn in the F. R. B. Index which started in April 1954 will still be going up, come February 1955. The upturn is strong and steady, like that which preceded the advance of 1950 and the advance from mid-1952 to mid-1953."*

[This advance occurred. The advance during 1950 amounted to 23 points; the advance mid-1952 to mid-1953 amounted to 20 points. The advance of 1954-1955 was 21 points!]

November 1954: *"Preliminary figures of the Geisinger Indicator for June and July 1954* [March and April 1955 when projected] *show values of 1.2 and 1.5 respectively. This is down a shade from the May value of 2.0. This setback is not too significant, but it does suggest a note of caution. It recalls* *what I told you in the August—September report, namely that 'if the coming advance in business outtops the peak of May 1953 I shall be surprised.'"*

[It did outtop it, but by nowhere nearly as much as it would have if the downward forces had not already begun to act, as you can see from Fig. 1. Thus you had your first warning of *underlying* weakness four years ago! However, this warning came from cycle knowledge, not from the Indicator.]

December 1954: *"The indicator has resumed its upward trend. It continues to suggest good business for the first quarter of next year, and probably beyond."*

[This occurred.]

1955

January 1955: *"The Modified Geisinger Indicator continues the advance it began in August of 1953. The turn which this Indicator made in August of 1953 foreshadowed by eight months the advance in the Federal Reserve Board Index of Industrial Production, which began April 1954. The continued advance of the Indicator suggests a continuing increase of industrial production until at least May of 1955."*

[This occurred.]

February 1955: *"The continued advance of the Indicator suggests a continuing increase of industrial production until at least June of 1955."*

[This occurred.]

March 1955: *"The continued advance of the Indicator suggests a continuing increase of industrial production until at least July of 1955."*

[This occurred.]

April 1955. [The Geisinger Indicator was not printed.]

May 1955: *"This is the first hint that the present boom in industrial production may contain within itself the seeds of decay, and that these seeds may be sprouting a little.*

"The indicator suggests caution for the 4th quarter of 1955."

[The move did indeed flatten out and reach its peak in the 4th quarter.]

June-July 1955: *"The Modified Geisinger Indicator, based on previous behavior, suggests continuing strength of the Federal Reserve Index of Industrial Production into the 4th quarter of 1955."*

[This occurred.]

August-September 1955: *"The fact that a crest has occurred* [in the Indicator] *introduces a note of caution. A leveling of the Federal Reserve Index of Industrial Production in the 4th quarter of 1955 is suggested as a possibility."*

[This occurred.]

October 1955: *"My own feeling for the near future is one of optimism still tinctured with caution."*

November 1955: *"Based on this indicator my own feeling for the near future continues to be one of optimism."*

[November 1955 levels were held for three more months.]

December 1955: *"The indicator is still very strong (5), but to my way of thinking it is trying to tell us to be cautious in respect to 1956."*

[Industrial production for 1956 averaged 143, one point less than the value (144) for December 1955.]

1956

January 1956: *"In my opinion this behavior* [of the Indicator] *suggests that the Federal Reserve Board Index may level off and decline during 1956."*

[It did.]

February 1956: *"The Federal Reserve Index of Industrial Production may level off and decline during 1956."*

[It did, reaching a low of 136 in July.]

March 1956: *"I continue to feel that the Federal Reserve Board Index will probably decline during 1956. My guess of levels is, as stated elsewhere in this issue, an average of 142 for the first half, 136 for the second half."*

[For the first half of 1956 I hit it on the button. For the second half I was low.]

April 1956: *"I continue to feel that, based upon the past behavior of this indicator, caution should be the watchword."*

[The index of industrial production declined from 143 in April 1956 to 136 in July 1956.]

May 1956: *"I see no reason to change my feeling that this is a time for caution, and that the F. R. B. Index of Industrial Production will go down during the coming year."*

[During the coming year, 1957, the index of industrial production declined from 146 in January to 135 in December.]

June 1956: *"The Federal Reserve Board Index of Industrial Production is down from 143 for February 1956 to a preliminary value of 142 for March 1956. It is interesting to see this index start to roll over in accordance with expectations.*

"It certainly is neat the way this thing works, isn't it?

"Caution continues to be the watchword for

1956."

June 13, 1956, published in Cycles for July 1956: *"You may remember that in February 1956 I ventured the guess (published in* Cycles *for March, p. 57) that the F. R. B. Index might average about 142 for the first half of this year, about 135 for the second half. As yet I see no reason to change this opinion."*

[The Geisinger Indicator gave only one month's advance notice of the minor 5-month upturn in late 1956.]

July 5, 1956: *"I continue to hold to the guess of an average of 135 for the 2nd half of 1956."* [This estimate turned out to be low. Actual value was 143.8.]

July 30, 1956: *"Since I wrote you last, the preliminary figure of the Federal Reserve Board Index of Industrial Production for June has become available. It is 141. This makes the average for the first half of the year 142.17. Last February my guess for the 1st half of 1956 was 142. I hope my February guess for the 2nd half of 1956 (135) is as good, but it isn't likely to be. A bull's eye 10 months in advance and twice in succession is too much to hope for. . .*

"From the figures already in I can tell that the Indicator will rise for April 1956 (December 1956 when projected) but I cannot yet tell how much. It rather looks as if it were bottoming out for next fall, doesn't it? Of course no one knows for sure, but I think that I'd be wise to raise last February's guess for 2nd half 1956 from 135 to 137, which I hereby do."

August 22, 1956: *"I have no comments in regard to next fall and winter in addition to those I have already made."*

September 30, 1956: *"The Modified Geisinger Indicator has behaved similarly three times before: At the end of 1948, followed by the softness of 1949; at the end of 1953, followed by the softness of 1954; and at mid-1951 followed by the leveling of 1951-1952. The failure of the F. R. B. Index to continue the decline started at the beginning of this year suggests to me that the precedent of 1951-1952 is more likely to be the one to be followed in the present instance than the precedent of 1948-49, or 1953-54. Remember, too, that the Modified Geisinger Indicator is devoid of trend, and that the F. R. B. Index has a basic underlying upward growth trend of about 3.3 points a year."*

[This resemblance to 1951-52 turned out to be so.]

October 27, 1956: *"As far as the Modified Geisinger Indicator can tell us (or at least as far as I can read what it says), the decline in industrial production that it has been telling us about is over. As the indicator unfolds we can get a better idea of whether the near future will be merely a leveling or will be a new advance."*

[As we now know, there was an advance which lasted until December.]

November 30, 1956: *"I continue to feel that the present relationship between the Modified Geisinger Indicator and the F. R. B. Index of Industrial Production is akin to the relationship of 1951. The Indicator will have to get very much stronger - up to 3 anyway - before it will suggest anything to correspond to the 1952-53 advance or the 1954-1955 advance. Caution and watchful optimism and the possibility of some dip in 1957 would be my idea of what the Modified Geisinger Indicator is trying to tell us at the present time."*

[The dip was from 146 in January 1957 to 135 in December 1957.]

December 1956: [No forecast.]

1957

January 2, 1957: *"I continue to feel that the precedent of mid-1951—mid-1952 is the more likely one to be followed in the present instance (i.e., mid-'56—mid-'57). At that time both the Indicator (advanced) and the Index fluctuated within narrow limits, more or less at cross purposes. I do not* [sic!] *interpret the present behavior of the index to mean that we have started a major advance a little early. However it does suggest good business for the next few months."*

[This occurred.]

February 26, 1957: *"Neither indicator is favorable at the present time. On the other hand neither indicator, as yet, suggests cause for alarm. Both indicators suggest a cautious wait and see attitude."*

"Remember, these indicators apply only to physical production in the United States; they have nothing to do with stock prices."

March 28, 1957: *"The indicators continue to suggest caution. It certainly looks as if the peak were passed."*

[The decline in industrial production began in January 1957.]

April 25, 1957: *"The Indicators continue to suggest caution for the balance of the year."*

[April 1957 value of the index of industrial production was 143; the December value was 135.]

May 29, 1957: *"Increased caution in respect to the prospects for physical production in the latter part of this year is suggested."*

June 27, 1957: *"Continued caution in regard to the prospects for physical production for the remainder of the year is suggested."*

July 25, 1957:
August 29, 1957:
September 26, 1957:
October 24, 1957:
November 15, 1957:
} *"a sideways motion is indicated."*

[The sideways motion did indeed continue through September, but the situation began to weaken in October and November. I missed this, except as I had told you previously that the peak had passed.]

November 29, 1957: *"It looks to me as if the Geisinger Indicator were turning down. Caution is suggested."*

December 30, 1957: *"Caution is suggested."*

1958

January 29, 1958: *"when the Geisinger Indicator has dropped below minus 2.5, it has been a danger signal. (Sept. 1948; Aug. 1951; May 1953; the steel strike low of 1956 should be ignored.)*

"A value below minus 2.5 developed *in January and March of 1957. This danger signal has not yet been reversed (by a plus 2.5). In fact, it looks as if the minus 2.5 signal might soon be repeated.*

"Continued caution is indicated."

February 27, 1958: *"The* rate *of decline* [of the F. R. B. Index of Industrial Production] *was sharp . . . this rate of decline is not likely to continue long. . . .*

"A Geisinger Indicator below minus 2.5 is a danger signal, the Oct. 1957 value of minus 2,67 indicated continued caution. . .

"When projected, this curve can turn in June or it can turn in July.

"On the basis of this analysis, the most optimistic conclusion that can be reached is that the decline in the Index of Industrial Production might level off. A turn-up is not indicated in the immediate future." (G. Shirk.)

[The low came in April, two months ahead of expectations.]

March 26, 1958: *"Continued caution is in*dicated."

April 24, 1958: *"The 1st Difference Indicator . . . is up fractionally . . . The Geisinger Indicator for December 1957 (August 1958 when projected) turned upward from minus 4.2 in November to minus 3.6. This is the first hesitation in the down-trend of this line.*

"Although these are the first signs that the decline is lessening they do not yet indicate that it will soon be over.

"Continued caution is indicated."

May 29, 1958: *"The turn has definitely come in both of these indicators. This fact suggests that an upturn—or at least a pause in the decline—in the Index of Industrial Production may come in the autumn.*

"Every decline contains within itself the seeds of recovery. The indicators show that this decline is no exception. The seeds are there. Beneath the surface, they are sprouting!

"You should remember, however, that both indicators are still at unfavorable levels. Continued caution is indicated. Wait until the Geisinger Indicator achieves a plus value of 2½ or more before settling back into complacent optimism in respect to the resumption of the boom!"

June 25, 1958: *"The Geisinger Indicator . . . . is up . . . The 1st Difference Indicator* [is up] *. . , The Modified Geisinger Indicator is confirmed at -5.26 for February . . . .* [up]. *Values for March and April 1958 cannot go lower . . . .*

"All of this is encouraging.

"Remember, however, that the Geisinger Indicators are much more volatile than the F. R. B. Index of Industrial Production. They have numerous minor moves that have no counterpart in the F. R. B. figures. Keep your fingers crossed about any real resumption of the boom until the Geisinger Indicator has reached + 2.50."

July 24, 1958: *"The turn in the Modified Indicator confirms that the decline has halted, at least temporarily. It should be pointed out that the First Difference Indicator is largely responsible for the upturn. The recovery in the more sensitive Geisinger Indicator has been much slower. Not until the Geisinger Indicator has reached + 2.50 is there any real reason for unqualified optimism."*

August 28, 1958: [See page 277 of this issue.]

CONCLUSION

This concludes the record up to date. If it is as good for the next four years I shall be well satisfied.

NOTE

Let me remind you again that, for $3.00 a year *extra*, members of the Foundation can receive the Geisinger Indicator by first class mail, as soon as the figures become available. This special service gets the forecast into your hands about a month before it would reach you in *Cycles*.

E. R. D.

Questions & Answers

In response to many requests for a long record of stock prices we are printing this material obtained from the Standard & Poor's Corporation and reproduced with their permission.

Standard & Poor's Monthly Stock Price Indexes - 1871-1956
1941-1943 = 10

COMPOSITE

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Avg.
1956	44.15	44.43	47.49	48.05	46.54	46.27	48.78	48.49	46.84	46.24	45.76	46.44	46.62
1955	35.60	36.79	36.50	37.76	37.60	39.78	42.69	42.43	44.34	42.11	44.95	45.37	40.49
1954	25.46	26.02	26.57	27.63	28.73	28.96	30.13	30.73	31.45	32.18	33.44	34.97	29.69
1953	26.18	25.86	25.99	24.71	24.84	23.95	24.29	24.39	23.27	23.97	24.50	24.83	24.73
1952	24.19	23.75	23.81	23.74	23.73	24.38	25.08	25.18	24.78	24.26	25.03	26.04	24.50
1951	21.21	22.00	21.63	21.92	21.93	21.55	21.93	22.89	23.48	23.36	22.71	23.41	22.34
1950	16.88	17.21	17.35	17.84	18.44	18.74	17.38	18.43	19.08	19.87	19.83	19.75	18.40
1949	15.36	14.77	14.91	14.89	14.78	13.97	14.76	15.29	15.49	15.89	16.11	16.54	15.23
1948	14.83	14.10	14.30	15.40	16.15	16.82	16.42	15.94	15.76	16.19	15.29	15.19	15.53
1947	15.21	15.80	15.16	14.60	14.34	14.84	15.77	15.46	15.06	15.45	15.27	15.03	15.17
1946	18.02	18.07	17.53	18.66	18.70	18.58	18.05	17.70	15.09	14.75	14.69	15.13	17.08
1945	13.49	13.94	13.93	14.28	14.82	15.09	14.78	14.83	15.84	16.50	17.04	17.33	15.16
1944	11.85	11.77	12.10	11.89	12.10	12.67	13.00	12.81	12.60	12.91	12.82	13.10	12.47
1943	10.09	10.69	11.07	11.44	11.89	12.10	12.35	11.74	11.99	11.88	11.33	11.48	11.50
1942	8.93	8.65	8.18	7.84	7.93	8.33	8.64	8.59	8.68	9.32	9.47	9.52	8.67
1941	10.55	9.89	9.95	9.64	9.43	9.76	10.26	10.21	10.24	9.83	9.37	8.76	9.82
1940	12.30	12.22	12.15	12.27	10.58	9.67	9.99	10.20	10.63	10.73	10.98	10.53	11.02
1939	12.50	12.40	12.39	10.83	11.23	11.43	11.71	11.54	12.77	12.90	12.67	12.37	12.06
1938	11.31	11.04	10.31	9.89	9.98	10.21	12.24	12.31	11.75	13.06	13.07	12.69	11.49
1937	17.59	18.11	18.09	17.01	16.25	15.64	16.57	16.74	14.37	12.28	11.20	11.02	15.41
1936	13.76	14.55	14.86	14.88	14.09	14.69	15.56	15.87	16.05	16.89	17.36	17.06	15.47
1935	9.26	8.98	8.41	9.04	9.75	10.12	10.65	11.37	11.61	11.92	13.04	13.04	10.60
1934	10.54	11.32	10.74	10.92	9.81	9.94	9.47	9.10	8.88	8.95	9.20	9.26	9.84
1933	7.09	6.25	6.23	6.89	8.87	10.39	11.23	10.67	10.58	9.55	9.78	9.97	8.96
1932	8.30	8.23	8.26	6.28	5.51	4.77	5.01	7.53	8.28	7.12	7.05	6.82	6.93
1931	15.98	17.20	17.53	15.86	14.33	13.87	14.33	13.90	11.83	10.25	10.39	8.44	13.66
1930	21.71	23.07	23.94	25.46	23.94	21.52	21.06	20.79	20.78	17.92	16.62	15.51	21.03
1929	24.86	24.99	25.43	25.28	25.66	26.15	28.48	30.10	31.30	27.99	20.58	21.40	26.02
1928	17.53	17.32	18.25	19.40	20.00	19.02	19.16	19.78	21.17	21.60	23.06	23.15	19.95
1927	13.40	13.66	13.87	14.21	14.70	14.80	15.22	16.03	16.94	16.68	17.06	17.46	15.34
1926	12.65	12.67	11.81	11.48	11.56	12.11	12.62	13.12	13.32	13.02	13.19	13.49	12.59
1925	10.58	10.67	10.39	10.28	10.61	10.80	11.10	11.25	11.51	11.89	12.26	12.46	11.15
1924	8.83	8.87	8.70	8.50	8.47	8.63	9.03	9.34	9.25	9.13	9.64	10.16	9.05
1923	8.90	9.28	9.43	9.10	8.67	8.34	8.06	8.10	8.15	8.03	8.27	8.55	8.57
1922	7.30	7.46	7.74	8.21	8.53	8.45	8.51	8.83	9.06	9.26	8.80	8.78	8.41
1921	7.11	7.06	6.88	6.91	7.12	6.55	6.53	6.45	6.61	6.70	7.06	7.31	6.86
1920	8.83	8.10	8.67	8.80	8.06	7.92	7.91	7.60	7.87	7.88	7.48	6.81	7.98
1919	7.85	7.88	8.12	8.39	8.97	9.21	9.51	8.87	9.01	9.47	9.19	8.92	8.78
1918	7.21	7.43	7.28	7.21	7.44	7.45	7.51	7.58	7.54	7.86	8.06	7.90	7.54
1917	9.57	9.03	9.31	9.17	8.86	9.04	8.79	8.53	8.12	7.68	7.04	6.80	8.50
1916	9.33	9.20	9.17	9.07	9.27	9.36	9.23	9.30	9.68	9.98	10.21	9.80	9.47
1915	7.48	7.38	7.57	8.14	7.95	8.04	8.01	8.35	8.66	9.14	9.46	9.48	8.31
1914	8.37	8.48	8.32	8.12	8.17	8.13	7.68	—N.Y.S.E. Closed—				7.35	8.08
1913	9.30	8.97	8.80	8.79	8.55	8.12	8.23	8.45	8.53	8.26	8.05	8.04	8.51
1912	9.12	9.04	9.30	9.59	9.56	9.58	9.59	9.81	9.86	9.84	9.73	9.38	9.53
1911	9.27	9.43	9.32	9.28	9.48	9.67	9.63	9.17	8.67	8.72	9.07	9.11	9.24
1910	10.08	9.72	9.96	9.72	9.56	9.10	8.64	8.85	8.91	9.32	9.31	9.05	9.35
1909	9.06	8.80	8.92	9.32	9.63	9.80	9.94	10.18	10.19	10.23	10.18	10.30	9.71
1908	6.85	6.80	6.87	7.24	7.63	7.64	7.92	8.26	8.17	8.27	8.83	9.03	7.78
1907	9.56	9.26	8.35	8.39	8.10	7.84	8.14	7.53	7.45	6.64	6.25	6.57	7.84
1906	9.87	9.80	9.56	9.43	9.18	9.30	9.06	9.73	10.03	9.97	9.93	9.84	9.64
1905	8.43	8.80	9.05	8.94	8.50	8.60	8.87	9.20	9.23	9.36	9.31	9.54	8.99
1904	6.68	6.50	6.48	6.64	6.50	6.51	6.78	7.01	7.32	7.75	8.17	8.25	7.05
1903	8.46	8.41	8.08	7.75	7.60	7.18	6.85	6.63	6.47	6.26	6.28	6.57	7.21
1902	8.12	8.19	8.20	8.48	8.46	8.41	8.60	8.83	8.85	8.57	8.24	8.05	8.42
1901	7.07	7.25	7.51	8.14	7.73	8.50	7.93	8.04	8.00	7.91	8.08	7.95	7.84
1900	6.10	6.21	6.26	6.34	6.04	5.86	5.86	5.94	5.80	6.01	6.48	6.87	6.15
1899	6.08	6.31	6.40	6.48	6.21	6.07	6.28	6.44	6.37	6.34	6.46	6.02	6.29
1898	4.88	4.87	4.65	4.57	4.87	5.06	5.08	5.27	5.26	5.15	5.32	5.65	5.05
1897	4.22	4.18	4.19	4.06	4.08	4.27	4.46	4.75	4.98	4.82	4.65	4.75	4.45
1896	4.27	4.45	4.38	4.42	4.40	4.32	4.04	3.81	4.01	4.10	4.38	4.22	4.23
1895	4.25	4.19	4.19	4.37	4.61	4.70	4.72	4.79	4.82	4.75	4.59	4.32	4.53
1894	4.32	4.38	4.51	4.57	4.40	4.34	4.25	4.41	4.48	4.34	4.34	4.30	4.39
1893	5.61	5.51	5.31	5.31	4.84	4.81	4.18	4.08	4.37	4.50	4.57	4.41	4.78
1892	5.51	5.52	5.58	5.57	5.57	5.54	5.54	5.62	5.48	5.59	5.57	5.51	5.55
1891	4.84	4.90	4.81	4.97	4.95	4.85	4.77	4.93	5.33	5.33	5.25	5.41	5.03
1890	5.38	5.32	5.28	5.39	5.62	5.58	5.54	5.41	5.32	5.08	4.71	4.60	5.27
1889	5.24	5.30	5.19	5.18	5.32	5.41	5.30	5.37	5.50	5.40	5.35	5.32	5.32
1888	5.31	5.28	5.08	5.10	5.17	5.01	5.14	5.25	5.38	5.35	5.24	5.14	5.20
1887	5.58	5.54	5.67	5.80	5.90	5.73	5.59	5.45	5.38	5.20	5.30	5.27	5.53
1886	5.20	5.30	5.19	5.12	5.02	5.25	5.33	5.37	5.51	5.65	5.79	5.64	5.36
1885	4.24	4.37	4.38	4.37	4.32	4.30	4.46	4.71	4.65	4.92	5.24	5.20	4.60
1884	5.18	5.32	5.30	5.08	4.65	4.46	4.46	4.74	4.59	4.44	4.35	4.34	4.74
1883	5.81	5.68	5.75	5.87	5.77	5.82	5.73	5.47	5.53	5.38	5.46	5.34	5.63
1882	5.92	5.79	5.78	5.78	5.71	5.68	6.00	6.18	6.24	6.07	5.81	5.84	5.90
1881	6.19	6.17	6.24	6.22	6.50	6.58	6.35	6.20	6.25	6.15	6.19	6.01	6.25
1880	5.11	5.20	5.30	5.18	4.77	4.79	5.01	5.19	5.18	5.33	5.61	5.84	5.21
1879	3.58	3.71	3.65	3.77	3.94	3.98	4.04	4.07	4.22	4.68	4.93	4.92	4.12
1878	3.25	3.18	3.24	3.33	3.34	3.41	3.48	3.45	3.52	3.48	3.47	3.45	3.38
1877	3.55	3.34	3.17	2.94	2.94	2.73	2.85	3.05	3.24	3.31	3.26	3.25	3.14
1876	4.46	4.52	4.51	4.34	4.18	4.15	4.10	3.93	3.69	3.67	3.60	3.58	4.06
1875	4.54	4.53	4.59	4.65	4.47	4.38	4.39	4.41	4.37	4.30	4.37	4.37	4.45
1874	4.66	4.80	4.73	4.60	4.48	4.46	4.46	4.47	4.54	4.53	4.57	4.54	4.57
1873	5.11	5.15	5.11	5.04	5.05	4.98	4.97	4.97	4.59	4.19	4.04	4.42	4.80
1872	4.86	4.88	5.04	5.18	5.18	5.13	5.10	5.04	4.95	4.97	4.95	5.07	5.03
1871	4.44	4.50	4.61	4.74	4.86	4.82	4.73	4.79	4.84	4.59	4.64	4.74	4.69

INDUSTRIALS

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Avg.
1956	46.88	47.13	50.59	51.38	49.64	49.38	52.27	51.89	50.15	49.52	48.92	49.79	49.80
1955	36.79	38.06	37.65	39.04	38.88	41.45	44.94	44.56	46.88	44.52	47.78	48.25	42.40
1954	25.55	26.12	26.72	27.97	29.21	29.43	30.64	31.26	32.20	33.17	34.56	36.14	30.25
1953	26.45	26.07	26.18	24.84	25.01	24.12	24.41	24.44	23.26	23.86	24.51	24.85	24.84
1952	24.61	24.05	24.04	23.96	23.94	24.66	25.49	25.53	25.06	24.48	25.24	26.29	24.78
1951	21.38	22.22	21.84	22.24	22.29	22.88	22.31	23.35	23.98	23.80	23.09	23.83	22.68
1950	16.58	16.90	17.03	17.58	18.27	18.68	17.31	18.47	19.18	20.06	20.05	19.92	18.33
1949	15.23	14.57	14.72	14.66	14.51	13.69	14.55	15.04	15.20	15.62	15.86	16.29	15.00
1948	14.60	13.88	14.07	15.19	15.92	16.65	16.21	15.74	15.53	16.02	15.16	15.11	15.34
1947	14.69	15.31	14.73	14.23	14.02	14.58	15.48	15.15	14.78	15.19	15.15	14.93	14.85
1946	17.34	17.38	16.85	18.02	18.04	17.85	17.42	17.12	14.65	14.35	14.20	14.58	16.48
1945	13.23	13.63	13.63	13.94	14.44	14.58	14.23	14.39	15.43	16.03	16.41	16.73	14.72
1944	11.78	11.63	11.95	11.75	11.98	12.58	12.90	12.67	12.47	12.78	12.67	12.90	12.34
1943	10.22	10.81	11.13	11.44	11.87	12.14	12.29	11.66	11.91	11.78	11.25	11.42	11.49
1942	8.95	8.67	8.24	7.93	8.01	8.47	8.82	8.76	8.84	9.45	9.58	9.68	8.78
1941	10.30	9.64	9.73	9.43	9.27	9.66	10.19	10.14	10.21	9.81	9.41	8.86	9.72
1940	11.95	11.87	11.84	11.94	10.28	9.34	9.55	9.79	10.26	10.39	10.73	10.34	10.60
1939	12.30	12.12	12.09	10.56	10.91	11.11	11.37	11.15	12.56	12.80	12.35	12.06	11.77
1938	11.10	10.89	10.22	9.81	9.78	10.07	12.12	12.29	11.81	12.98	12.96	12.63	11.39
1937	16.87	17.51	17.52	16.45	15.74	15.26	16.18	16.45	14.12	12.04	10.82	10.88	14.97
1936	12.96	13.71	14.12	14.20	13.44	13.93	14.66	14.96	15.17	16.04	16.69	16.41	14.69
1935	8.88	8.72	8.19	8.67	9.40	9.64	10.14	10.71	11.01	11.39	12.43	12.38	10.13
1934	9.56	10.11	9.63	9.86	8.88	8.98	8.60	8.41	8.22	8.31	8.70	8.81	9.00
1933	5.35	4.74	4.93	5.75	7.41	8.81	9.40	9.15	9.37	8.49	8.92	9.16	7.61
1932	6.39	6.33	6.35	4.83	4.27	3.80	4.00	5.94	6.39	5.49	5.45	5.18	5.37
1931	12.34	13.27	13.45	12.18	10.97	10.56	10.95	10.72	9.15	7.91	8.09	6.54	10.51
1930	17.13	18.06	18.73	19.93	18.80	16.68	16.41	16.33	16.21	13.84	12.97	12.17	16.42
1929	21.22	21.12	21.68	21.62	21.70	21.55	22.95	23.89	24.68	22.26	16.44	17.03	21.35
1928	14.68	14.43	15.34	16.35	16.74	15.96	16.18	16.80	18.11	18.70	19.94	19.75	16.92
1927	10.74	10.96	11.16	11.42	11.85	12.01	12.38	13.18	14.08	13.80	14.20	14.61	12.53
1926	10.04	10.10	9.38	9.06	9.12	9.59	10.06	10.52	10.67	10.46	10.58	10.84	10.04
1925	8.13	8.25	7.95	7.91	8.16	8.36	8.66	8.75	9.02	9.41	9.79	9.87	8.69
1924	6.84	6.87	6.67	6.42	6.35	6.45	6.77	7.05	6.73	6.95	7.22	7.66	6.83
1923	6.87	7.22	7.40	7.08	6.64	6.25	6.02	6.07	6.11	5.99	6.24	6.60	6.54
1922	5.46	5.57	5.78	6.20	6.52	6.46	6.43	6.59	6.82	7.03	6.67	6.72	6.35
1921	5.35	5.31	5.17	5.23	5.40	4.83	4.72	4.57	4.72	4.86	5.23	5.50	5.07
1920	7.56	6.75	7.31	7.33	6.78	6.64	6.56	6.06	6.23	6.05	5.65	5.08	6.50
1919	5.93	5.95	6.21	6.57	7.10	7.44	7.85	7.36	7.55	8.10	7.86	7.67	7.13
1918	5.25	5.46	5.31	5.32	5.53	5.54	5.62	5.66	5.57	5.79	5.91	5.84	5.57
1917	6.80	6.37	6.71	6.56	6.55	6.75	6.52	6.28	5.91	5.54	4.98	4.65	6.15
1916	6.40	6.36	6.35	6.24	6.35	6.35	6.21	6.37	6.90	7.17	7.61	7.07	6.62
1915	4.14	4.07	4.29	4.85	4.76	4.97	5.13	5.49	5.82	6.24	6.37	6.47	5.22
1914	4.59	4.73	4.70	4.54	4.57	4.55	4.27	—N.Y.S.E. Closed—				4.08	4.50
1913	5.07	4.81	4.70	4.71	4.57	4.23	4.32	4.57	4.66	4.44	4.30	4.33	4.56
1912	4.70	4.80	4.84	5.16	5.17	5.28	5.30	5.44	5.54	5.57	5.44	5.13	5.18
1911	4.81	5.06	4.96	4.92	5.05	5.13	5.10	4.80	4.39	4.30	4.53	4.68	4.82
1910	5.61	5.23	5.43	5.24	5.11	4.81	4.53	4.69	4.71	5.00	5.08	4.83	5.02
1909	4.41	4.19	4.19	4.49	4.80	4.98	5.09	5.32	5.41	5.56	5.69	5.74	4.99
1908	3.08	2.98	3.23	3.43	3.61	3.61	3.85	4.16	3.99	4.07	4.43	4.43	3.74
1907	4.89	4.78	4.30	4.23	4.06	3.94	4.12	3.70	3.50	2.95	2.75	2.89	3.84
1906	4.99	4.95	4.73	4.73	4.56	4.56	4.41	4.82	5.01	5.04	5.03	4.98	4.82
1905	3.77	3.96	4.10	4.12	3.86	3.85	4.01	4.18	4.13	4.26	4.35	4.71	4.11
1904	2.72	2.65	2.63	2.68	2.59	2.60	2.73	2.83	3.00	3.27	3.64	3.71	2.92
1903	3.82	3.93	3.81	3.64	3.52	3.30	3.01	2.88	2.74	2.56	2.49	2.64	3.20
1902	3.91	3.96	3.96	4.07	4.01	3.91	3.93	4.02	4.04	3.92	3.72	3.58	3.92
1901	3.75	3.81	3.95	4.27	3.92	4.45	4.17	4.14	4.05	3.89	3.88	3.75	4.00
1900	3.51	3.59	3.51	3.50	3.23	3.07	3.13	3.21	3.13	3.26	3.61	3.75	3.38
1899	3.47	3.51	3.73	3.86	3.63	3.50	3.60	3.80	3.81	3.83	3.88	3.44	3.67
1898	2.49	2.51	2.40	2.40	2.63	2.76	2.83	2.94	2.90	2.82	2.99	3.24	2.74
1897	2.23	2.19	2.19	2.12	2.11	2.22	2.35	2.52	2.61	2.49	2.37	2.45	2.32
1896	2.25	2.37	2.35	2.39	2.35	2.25	2.04	1.90	2.07	2.12	2.34	2.22	2.22
1895	2.28	2.24	2.31	2.48	2.68	2.72	2.69	2.67	2.64	2.59	2.45	2.25	2.50
1894	2.31	2.35	2.46	2.53	2.46	2.45	2.37	2.49	2.46	2.34	2.34	2.30	2.41
1893	3.40	3.33	3.15	3.09	2.59	2.44	2.15	2.09	2.34	2.51	2.49	2.38	2.86
1892	3.01	3.00	3.03	3.05	3.09	3.15	3.18	3.30	3.27	3.40	3.44	3.39	3.19
1891	2.81	2.88	2.88	2.95	2.89	2.84	2.77	2.80	2.93	2.89	2.88	3.08	2.88
1890	3.00	2.93	2.95	2.96	3.14	3.17	3.17	3.14	3.11	3.03	2.72	2.59	2.99
1889	3.00	3.18	3.21	3.25	3.35	3.54	3.50	3.40	3.33	3.18	3.00	2.97	3.24
1888	2.56	2.56	2.49	2.50	2.55	2.60	2.68	2.75	2.83	2.90	2.97	2.95	2.70
1887	2.59	2.60	2.63	2.70	2.73	2.69	2.61	2.55	2.51	2.50	2.53	2.53	2.60
1886	2.41	2.48	2.44	2.43	2.38	2.46	2.48	2.48	2.49	2.55	2.60	2.59	2.48
1885	2.01	2.08	2.09	2.11	2.12	2.12	2.14	2.23	2.26	2.34	2.41	2.39	2.19
1884	2.11	2.16	2.18	2.15	1.98	1.93	1.96	2.07	2.06	2.06	2.04	2.01	2.06
1883	2.28	2.25	2.22	2.27	2.28	2.32	2.32	2.28	2.25	2.20	2.21	2.15	2.25
1882	2.49	2.44	2.41	2.43	2.39	2.36	2.43	2.46	2.47	2.41	2.33	2.31	2.41
1881	2.28	2.33	2.35	2.38	2.49	2.57	2.49	2.49	2.48	2.50	2.52	2.48	2.45
1880	2.21	2.16	2.19	2.09	2.02	2.02	2.04	2.09	2.08	2.03	2.09	2.13	2.10
1879	1.76	1.78	1.78	1.81	1.84	1.85	1.85	1.83	1.87	2.11	2.19	2.14	1.90
1878	1.76	1.75	1.76	1.75	1.81	1.79	1.79	1.78	1.83	1.79	1.79	1.78	1.78
1877	2.11	2.06	1.96	1.86	1.83	1.57	1.61	1.66	1.72	1.78	1.73	1.74	1.80
1876	2.30	2.44	2.38	2.36	2.35	2.34	2.27	2.26	2.13	2.14	2.14	2.14	2.27
1875	2.30	2.32	2.33	2.36	2.36	2.21	2.22	2.21	2.23	2.18	2.23	2.26	2.27
1874	2.39	2.52	2.51	2.45	2.38	2.46	2.39	2.32	2.31	2.33	2.40	2.39	2.40
1873	2.49	2.49	2.49	2.48	2.49	2.45	2.44	2.47	2.28	2.13	2.03	2.25	2.37
1872	2.19	2.26	2.37	2.45	2.48	2.47	2.40	2.37	2.28	2.37	2.43	2.47	2.38
1871	1.63	1.77	1.64	1.96	2.09	2.10	2.08	2.09	2.15	2.08	2.09	2.12	2.00

THE 9-YEAR CYCLE IN PRESBYTERIAN CHURCH MEMBERSHIP

BY G. SHIRK

The June, 1950 issue of *Cycles* told about a 9-year cycle in the number of new members of the Presbyterian Church in the U. S. A. (Northern).

Figure 1 below gives this 9-year cycle as it was defined in 1950; it shows how it has come out since.

On the chart the solid line diagrams the actual cycle. The portion that has been added since 1950 is emphasized by means of the heavy black line. The "ideal" 9-year cycle is shown by the broken line.

As can be seen, the strength of the cycle has become smaller over the years, although the addition of the later years suggests that the cycle is continuing.

The reduced amplitude of the cycle in recent years may be a result of the size and age of the church. On the other hand, the cycle as we found it in the limited time span our data cover may be part of a more complex situation which only a longer series of figures could explain.

However, it cannot be denied that the ideal area of high as outlined by the broken line with the peak in 1949 has been matched since 1950 by a corresponding area of high in the actual line.

Why there should be an upsurge in new members in the Presbyterian Church about every nine years is a good question. That this 9-year rhythm should persist, although at reduced strength, is even more intriguing.

The fairly regular ups and downs in church membership were first noticed by the Reverend Harold E. Martin, who was Pastor of the First Congregational Church of Norwalk, Connecticut, in 1950. He had charted long records of the number of new members of various churches in various places, He brought his results to the attention of the Foundation.

Mr. Martin had noticed, first, that regardless of location, there was a tendency for membership to go up and down together. That is, when people were flocking to join the Congregational Churches in Boston, they would also be flocking to join the Congregational Churches in Norwalk, and San Francisco, and Seattle.

This seemed to show that, although local situations might be important, there were other more important national influences at work affecting the desire of people for religion.

The second point the charts made was that additions to membership in the different Protestant denominations went up and down more or less together. At times when great numbers of people were joining Congregational Churches (regardless of location), they were also rushing to join the Methodist Churches, and the Episcopal Churches, and the Presbyterian Churches, regardless of location.

Finally, the regularity of the new additions to membership was visible by inspection. This regularity was of interest to the Foundation.

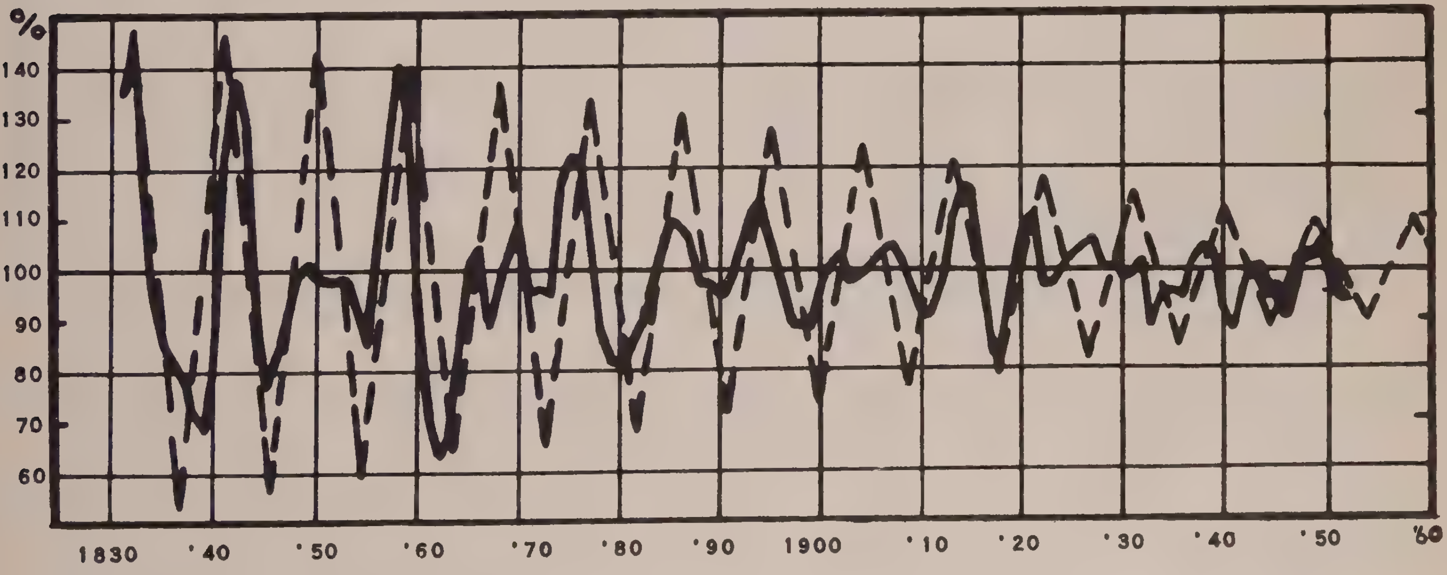


Fig. 1 The 9-Year Cycle in New Members in the Presbyterian Church in the U. S. A. (Northern)

This regularity is also a matter of interest, and of great importance, to all church workers.

The Foundation analysed the Presbyterian Church records of new members added and found the cycle diagrammed on Figure 1. In fact, Figure 1 is just a tracing of the original chart used in 1950, with the later years added.

The data that were used were the number of new members added by profession or reaffirmation of faith. Additions through certification and reinstatement were omitted in the belief that the figures of profession and reaffirmation are a better index of church growth or the impact of evangelism. It should also be mentioned that these figures do not include the United Presbyterian Church.

The solid line on Figure 2 shows the data after it has been smoothed by means of a moving average. The original data jump around some, and it is easier to see the cycle after the random year-to-year variations have been eliminated.

The long term growth trend is shown on Figure 2 by means of the dotted line. The relationship between the two lines on Figure 2 is expressed by the solid line on Figure 1. This relationship is the actual cycle, and from this actual cycle the average timing of the "ideal" crest is derived.

The crests, or high points, in religious interest, come, on the average, every nine years. Ideally, a crest was due in 1949, and the next crest was due in 1958.

Without going into technicalities, it should be mentioned that the smoothing process loses some values at the end, but that the last figures plotted include the 1957 value.

The ideal time of the crests of the 9-year cycle are noted on Figure 2 by the arrows.

Of course, 1958 figures are not available yet, but it is interesting to note that the merger of the Presbyterian Church and the United Presbyterian Church occurred in 1958, presumably a year of great church activity.

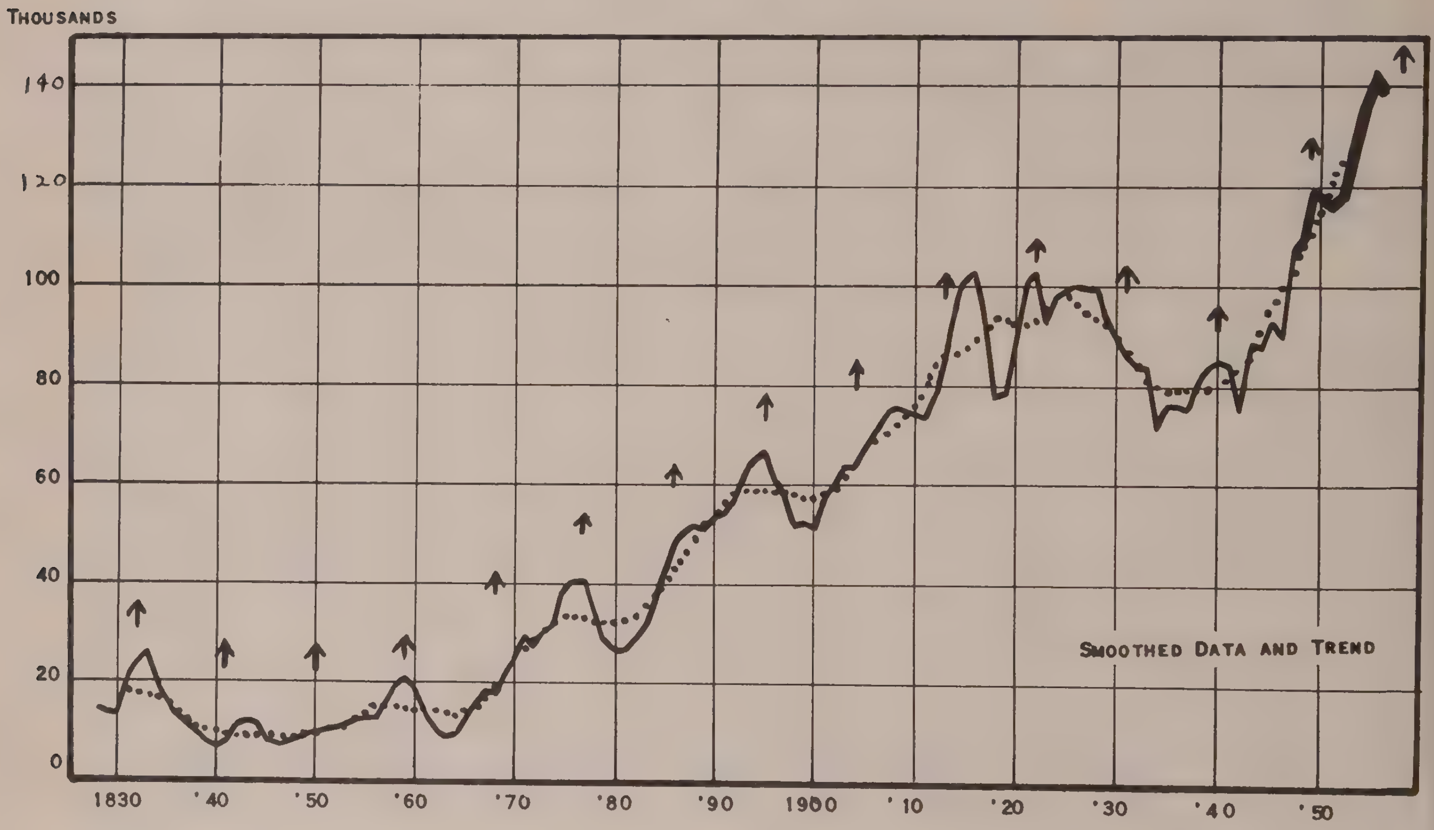


Fig. 2 New Members in the Presbyterian Church in the U. S. A. (Northern). Smoothed Data and Trend.

THE 17-WEEK CYCLE IN INDUSTRIAL STOCK PRICES--CONTINUED*

EDWARD R. DEWEY

Further work has been done on the 17-week cycle in industrial stock prices.

Cycle Present for 30 Years

This cycle is present in the ten-year period 1938-1947 and in the ten-year period 1928-1937 as well as in the ten year period 1948-1957. The cycle is as strong in the two earlier decades as it is in the last one.

The additional figures show that, over the entire thirty years, the length of the cycle averages a little longer than during the ten years studied originally. From the beginning of 1948 through May of 1958 the length of the perfectly regular pattern that most nearly fits all the waves is 17.00 weeks long. From the beginning of 1928 through May of 1958 the length of the perfectly regular pattern that most nearly fits all the waves is 17.12 weeks long. That is, the perfectly regular pattern that most nearly fits all the waves since 1927 is 7/10 of 1% longer than the perfectly regular pattern that most nearly fits all the waves since 1947.

Does this fact mean that the length of this cycle is changing? After careful study, I do not think so. I think the varying length is due to the presence of one or more cycles of closely related wave length. There seem to be several of these cycles. One of them seems to be about 16.39 weeks long. We will investigate this cycle and other cycles of closely related wave lengths as soon as we can.

Characteristics of the Cycle

The characteristics of the so-called 17-week cycle over the 30-year period are as follows:

Average Length: 17.12 weeks; 3.937 months; .3281 years.

Average Strength: 1.4% above trend at time of crest. Overall average strength from trough to crest, 2.8%.

Ideal Timing: A recent date of an ideal high is the week of August 6th. Dates of other ideal highs are 17.12 weeks forward and backward from that date. (*Ideal highs* are the dates, exactly 17.12 weeks apart, that most nearly fit all the various crests of the waves of this cycle). Troughs fall midway between these crests.

The Chart

The chart on the following two pages shows two curves. Let me tell you what they are:

The broken line is a picture of the ideal wave.

The solid line shows the wave as it has developed since 1927. We removed the trend from Standard & Poor's Corporation Industrial Stock Price Index and ironed out the irregularities with a 5-week moving average. These figures were then filtered to minimize randoms and other cycles. The filtering helps you to see the cycle clearly.

Technical

The technician will be interested to know that the filtering consists merely of a weighted moving average with the weights +½, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, +1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, +½.

The broken zigzag line diagrams a perfectly regular 17.12-week cycle.

So What?

So what?

One short cycle (1) *in the averages*, and (2) *by itself* is not enough to enable you to "beat the market."

Undoubtedly, in certain individual stocks, the cycle is much stronger. In such stocks, even by itself, it might conceivably be strong enough to operate on. In the averages it is much too weak.

However, even in individual stocks it probably would have to be combined with other short cycles to produce anything of importance.

In the meantime, until our work results in a knowledge of some of these other short cycles, you should use this knowledge *in conjunction with other techniques* to help you outguess the short-term moves and the short-term turning points.

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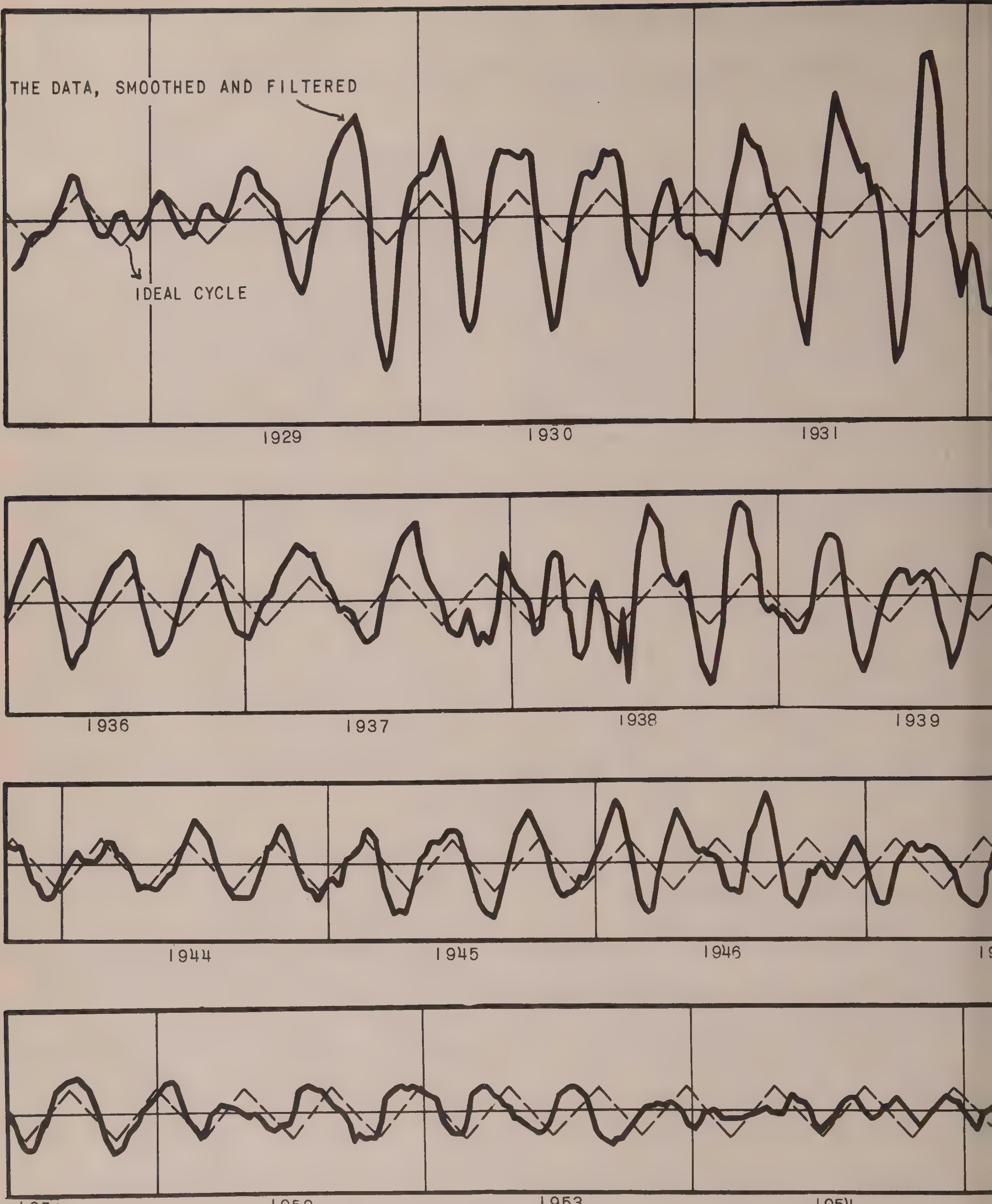
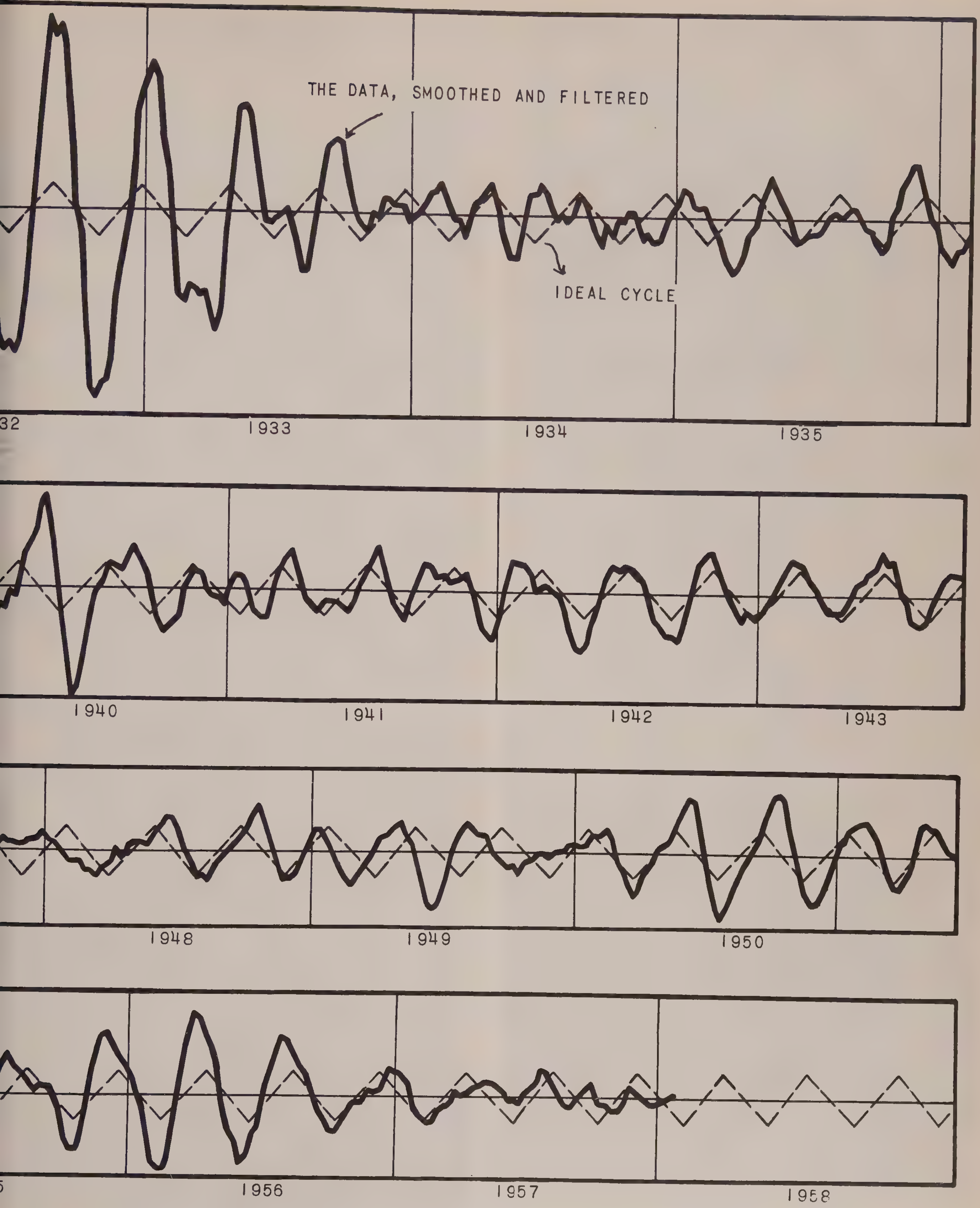
* A Postscript to Chapter XII of "Cycles—The Science of Prediction" by E. R. Dewey and E. F. Dakin.



THE 17.12-WEEK CYCLE IN STANDARD AND POO



NDEX OF INDUSTRIAL STOCK PRICES

Research by Others

SUNSPOT-CLIMATE RELATIONSHIPS

BY LOUIS H. BEAN*

Dr. Willett's interesting venture in long-range extrapolation of sunspot-climate relations[1] tempts my own extrapolating pencil to see whether I would obtain the same conclusions.

With regard to sunspot numbers, Dr. Willett concluded that "the next sunspot maximum will be delayed until at least 1962, possibly longer, 15 years or more from the 1947 maximum. The maximum annual sunspot number will be one of the smallest on record, probably in the vicinity of 50."

Louis H. Bean

Concerning temperature, Dr. Willett concluded that "the temperature level over much of the world will fall significantly during the next 15 years, probably reaching a first minimum level during the 1960–1965 pentad. . . . Exceptions to this downward trend of temperatures may be noted in the Antarctic, the interior of western Canada and the northwestern United States, and particularly from the eastern Mediterranean northward into Russia."

Discussing rainfall, he points to an increase already underway and concludes that "lake levels in the western United States probably will reach a first maximum by 1960. No possibility of another dust-bowl decade in the western United States is suggested before 1970–1980, or more possibly between 2000–2020, but no real probability of such an occurrence is definitely indicated within the next century."

These rainfall and temperature projections are more interesting (from my agricultural standpoint) than the sunspot predictions. It is, therefore, all the more unfortunate that Dr. Willett's brief article does not contain enough basic data to examine the validity of these rainfall-temperature pronouncements. All we can do with the material given in his table 1 is observe that there is no consistent correlation between temperature and sunspot numbers. His record shows periods of high temperatures sometimes associated with high sunspot numbers, sometimes with low. Consequently, we must note that if the predicted weather trends should materialize as projected by Dr. Willett, it will not be because of a demonstrated firm correlation with sunspot numbers.

The basis for the Willett sunspot-number predictions can be more readily examined. They rest chiefly on the tabulation of maximum numbers shown in my table 1. "Most noteworthy," Dr. Willett says, "is the long-term variation, such that four active sunspot maxima alternate with three inactive maxima." This observation is supported by another, that in alternating 40-year periods, annual sunspots average about

TABLE 1. Tabulation of maximum sunspot numbers.

		Average	
Year	Sunspots	4-year	3-year
1750	83		
1761	86		
1769	106	120	
1778	154		
1787	132		
1804	48		
1816	46		55
1830	71		
1837	138		
1848	124	124	
1860	96		
1870	139		
1883–4	64		
1893	85		71
1905	64		
1917	104		
1928	78	112	
1937	115		
1947	152		

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*Louis H. Bean for many years was associated with the Department of Agriculture, and is now an Economic Analyst. This article first appeared in the Journal of Meteorology, February, 1952 and is reproduced with permission.

[1] H. C. Willett, "Extrapolation of Sunspot Climate Relationships," J. Meteor., 8, 1-6, 1951.

ouble the number of the intervening 40-year periods.

A somewhat different statistical approach raises onsiderable doubt as to the validity of the conclusion hat the next maximum will be delayed until 1962 or onger, and that it will be one of the smallest maxima n record.

The approach I suggest is based, first, on the fact hat the numbers included in the 4-year average conain too wide a range, and second, on the observation hat the record up to 1917 can be divided into three roups of five maxima (the first two groups having imilar patterns of fluctuations; the third being quite lifferent) and the period 1917–1947, possibly an inomplete one, corresponding to the first two. This is hown in table 2. The reason for considering period 4 s possibly similar to periods 1 and 2 is that the three most recent maximum numbers are in ascending order (78, 115 and 152), as are the other comparable numbers (86, 106, 154 and 46, 71, 138). If the next maximum in period 4 follows this pattern, it will not be one of the smallest on record; just the opposite, probably nearer 125–130 than 50.

TABLE 2. Grouping of sunspot maxima.

Period 1 1750–1787	Period 2 1804–1848	Period 4 1917–1947	Period 3 1860–1905
83	48	104	96
86	46	78	139
106	71	115	64
154	138	152	85
132	124		64

Now, let's examine the dates included in these periods for a possible clue to the date of the next maximum. The dates given in Willett's table are grouped in table 3.

For periods 1, 2 and 3, there is a rough tendency for the number of years between peaks to average higher in the early stage and to average lower toward the end of each period. There is, of course, no solid basis here for a positive generalization; but insofar as it offers any hint at all, it is that the maximum following that of 1947 should appear nine to eleven years later. This would place it as early as 1956, 1957 or 1958, and not as late as 1962 or later.

If the next maximum should appear in 1956 or 1957, we then perhaps might be warranted in expecting the subsequent one to be delayed and to appear about 1970.

There is another bit of arithmetic that might be resorted to for a clue to the date of the next maximum. First, subtract the dates of the first period from the corresponding dates of the fourth, and you get an interval increasing from 167 to 169 years:

Years of maxima		Difference
1917	1750	167
1928	1761	167
1937	1769	168
1947	1778	169
(1956–7)	1787	(169–170)

If the next interval is 169 or 170, it would place the next maximum (corresponding to that of 1787) in 1956 or 1957. Now, subtract the dates of the second period from the fourth, and you get a range decreasing from 113 and 112 in the first two intervals to 107 and 110 in the last two:

Years of maxima		Difference
1917	1804	113
1928	1816	112
1937	1830	107
1947	1837	110
(1957–8)	1848	(109–110)

And, if you assume that the next maximum will appear 107 to 113 years after the corresponding one of 1848, it should appear some time between 1955 and 1961, say in 1957 or 1958.

This is probably as much liberty as we should permit a projecting pencil to indulge in on a series which, after all, in spite of its covering a span of 200 years, consists of only 19 observations. Dr. Willett used 18 of them, excluding 1750, to obtain alternating averages of groupings of four and three. By using the 19 observations, I obtain three complete patterns of five observations in each and guess that the next maximum will complete the fourth pattern.

TABLE 3. Grouping of dates.

Period				Duration			
1	2	4	3	1	2	4	Avg.
1738[2]	1787	1905	1848				
1750	1804	1917	1860	12	17	12	14
1761	1816	1928	1870	11	12	11	11
1769	1830	1937	1883	8	14	9	10
1778	1837	1947	1893	9	7	10	9
1787	1848		1905	9	11		

Follow Dr. Willett's method of projection if you prefer to think of the next sunspot maximum to appear not earlier than 1962 and to be one of the lowest on record. Follow mine if you prefer to think of it as coming in 1956–1958 and as being about two and a half times as high as Dr. Willett's projection.

EDITOR'S NOTE: AS YOU KNOW EVENTS HAVE VINDICATED MR. BEAN'S PROJECTION.

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[2] In case Dr. Willett's forecast of the date and number of the next sunspot maximum should turn out to be more nearly correct than mine, I want to record a prior "success" in using my selection of periods for a hindcast. The date of the maximum preceding 1750 is not contained in Dr. Willett's tabulation. While showing my analysis to Dr. Willett, I pointed out that my patterns called for a maximum around 1736–1738. He has since called my attention to H. W. Clough's comprehensive article, "The 11-year sun-spot period, secular periods of solar activity, and synchronous variations in terrestrial phenomena," in *Mon. Wea. Rev.*, April 1933, that shows a maximum in 1738.

Chapter Affairs

WASHINGTON, D. C.

The August meeting of the Washington Chapter was held August 22 at the Washington Post Building, 1515 L Street, N. W.

All members who missed this meeting, but would like to attend in the future should contact Ralph C. Benner, Temporary President at JAckson 7-2148, or A. Sherwood Vickers, Temporary Secretary, at NAtional 8-8387.

E. R. Dewey will address the Washington Chapter on Wednesday, October 29, at 8:00 p.m.

NEW YORK

Sixty members and their guests attended the eighth regular monthly dinner-meeting of the New York Chapter, held on Tuesday, August 12, at the White Turkey Sutton Place restaurant. New members, as well as the many guests of members, found an opportunity during the social hour before dinner to meet the older members.

Statistical Indicator Head Speaks

After dinner, and the customary abbreviated Chapter business session, the group heard a talk by Leonard H. Lempert on the subject: *Recognizing Cycles in Contemporary Business Statistics.* Mr. Lempert is the Director of Statistical Indicator Associates, of Great Barrington, Massachusetts.

Lempert, who was born in Montclair, New Jersey, graduated from Lehigh University, and later attended Bowdoin College and Columbia University Graduate School. Following three years in the Army Air Force, he joined the American Institute for Economic Research, where he served successively as Fellow, Senior Research Assistant, and Director of Research. While with the Institute, he co-authored two books, *Economic Tides and Trends* and *Where Are We Going?*. He is also the author of numerous magazine articles and technical papers.

Lempert's Address

Mr. Lempert divided his address into three parts:

1) The contribution to the field of business statistics of the business and financial section of periodicals.
2) The contribution to the field of business statistics of electronic processing.
3) The contribution of the "statistical indicator" approach.

Problems Facing the Business Statistician

In his opening remarks, Lempert pointed out that one of the major problems facing every business statistician is the difficulty of determining "What is actually happening?" Then, too, it is almost equally difficult to determine "What actually happened last week?— last month?— and sometimes even last year?" To lend weight to his views, he quoted from articles in various business and financial periodicals, pointing out the frequent unreliability of much of the "statistical" data contained therein.

N.B.E.R. Method of Decomposing Data

He then explained the method recommended by the National Bureau of Economic Research for the decomposition of business data. That method (using electronic computers for the purpose) breaks data down into four components, seasonal, irregular, cycle and trend.

When statistical operations are being performed, having *prediction* as the end in view, the N.B.E.R. method is particularly suitable, according to Lempert, since it provides seasonal factors for a year ahead.

Lempert Describes His Own Report

In response to questions from the audience, Mr. Lempert discussed briefly the *Statistical Indicator* report published each week by his firm. He mentioned that it is his considered opinion that "The recession has had its back broken," but added that "There are factors which make it quite difficult to believe that a serious, sustained uptrend is already in process."

Dewey To Address December Meeting

In closing the meeting, Chapter President Dorland reminded all present of the dinner-meetings and programs planned for forthcoming months. Of potential interest to *Cycles'* readers is the special meeting to be held on Thursday, December 4, in private rooms of the White Turkey Sutton Place restaurant, 260 Madison Avenue (corner of East 38th Street), New York City.

SPEAKER: E. R. Dewey, Director,
Foundation for the Study of Cycles

SUBJECT: *How to Make A Cycle Analysis*

That meeting is open to all Foundation members and their guests. It will begin with a social hour at 5:45 P.M., followed by dinner at about 6:30 P.M. The cost for the evening, excluding cocktails and checkroom fee, will be $5.00. To insure seating, advance reservations accompanied by check made out to the New York Chapter should be mailed to the Chapter Treasurer, Paul H. Halladin, 24 Oakview Avenue, Maplewood, New Jersey.

Jack A. Dorland

Letters to the Editor

THE 17-WEEK STOCK CYCLE

Dear Mr. Dewey:

You can imagine my thrill when I opened the recent issue of *Cycles* and saw the article on the 17-week cycle in the stock market. This is, of course, the cycle that I had found in my studies and called the 17-1/2-week cycle. . .I am sending you some of the work I did using the Dow Jones Industrials instead of Standard & Poor's.

Because of the fact that the Foundation is now working on weekly data and you have announced the policy of looking for other cycles, the work I am sending you may help you obtain hints of what to look for.

An example of how using this shorter term cycle work has worked out is in an article published in October, 1955. Using your long term cycles and the short term cycles that we have discovered, in combination with our value and technical studies, we forecast six months in advance the actual top of the stock market as the end of the first quarter of 1956 with the Dow Jones Industrials at the 525 level. I am sending this information not to crow about but to show what you already suspect - that there is a great deal of validity even in the short term cycles.

Sincerely,
Richard A. Hanan

Mills Building
San Francisco, Calif.

Editor's Note: Enclosed with the letter was a clipping from the San Francisco News of Friday, October 21, 1955. In an article summarizing the opinions of various financial services, Mr. Hanan was quoted as saying, "From the evidence now on hand, our projection is that the stock market will make a top around the end of the first quarter of 1956, with the Dow Jones Industrial average at approximately the 525 level."

PRO AND CON

Your work provides something few others do. Keep up the good work!

* * *

Out of curiosity I gambled ten dollars. The first two issues I studied from A to Z - upside and down. I came to the conclusion that I was either nuts or out of my class mentally. It was all hieroglyphics to me so the balance of the issues went into the ashcan.

* * *

I think you are doing a remarkable job.

* * *

Is there not some way that your reports can be more easily understood? It is impossible for me to get the timing. I am mainly interested in knowing if possible, the nearby effects on stocks. Maybe I should see a fortune teller.

THE GOLDEN MEAN

Editor's Note: The Golden Mean, referred to in the letter from Doctor Webster which follows, is the ratio of 1.000 to 1.618. It has many interesting characteristics.

As we told you in an article called "Non-Symmetrical Cycles" published in *Cycles* for February 1955 (pp. 48-49), "this numerical value is quite prevalent in nature. It is known as the law of leaf arrangement (phyllotaxis). It governs not only the arrangements of leaves on the stem of a plant, but the shape of various natural curves. The curve of the conch shell, the curve of the horn of the rhinoceros, and the curve of the toe nails of a canary bird, to mention but a few other examples, are all governed by this .618 relationship.

"The simplest approximate expression of this law is a series of numbers obtained by adding whole numbers as follows: Starting with zero and one, make each following term equal to the sum of the two previous terms.

"It "don't tell so good" but it is really very simple. You can see this from the following illustration:

1st term 0
2nd term 1
3rd term 1 (1 + 0)
4th term 2 (1 + 1)
5th term 3 (1 + 2)
6th term 5 (2 + 3)
7th term 8 (3 + 5)
8th term 13 (5 + 8)
9th term 21 (8 + 13)
10th term 34 (13 + 21)
11th term 55 (21 + 34)
12th term 89 (34 + 55)
13th term 144 (55 + 89)
etc.

"The series of numbers thus obtained is called the Fibonacci (pronounced Fee-bo-naatch'-ee) series, after a famous Italian mathematician. Each of these terms is 1.6180 of the previous term, as nearly as you can get with whole numbers. Thus 5 is 1.666 of 3; 8 is 1.600 of 5; 13 is 1.625 of 8; 89 is 1.6182 of 55; 144 is 1.6179 of 89, and so on.

"I could give you countless examples of the operation of this law of nature. Here are two. In the Norway spruce, for instance, in over 90% of the cases, you can trace five rows of scales winding up the cone in one direction, three rows winding less steeply the other way. With the common English larch the normal number is 8 rows in one direction, five in the other."

Progressions of this type are outside the field of cycle analysis. They fall in the larger field of *pattern*. However, some cycle analysts believe that cycles combine according to this law.

Doctor Webster's Letter

Dear Mr. Dewey:

Many thanks for your letter about the Golden Mean, and my "Golden Mean Form in Music" paper.

The 7.6-month (33-week) period is very close to the Golden Mean of the year; and I was interested to read on page 281 of the November, 1957 *Cycles* that Mr. A. B. Hanak has found 33 and 17 week cycles in the stock market! . . .

The 7-year period the ancients wrote about, which is certainly present in some other physical and biological data, is the Golden Mean of the mean solar cycle of 11.2 years.

The Golden Mean is certainly present in many fields of study, as Sir T. A. Cook wrote about in his fascinating *Curves of Life*, 1914. The best account I know of about the Golden Mean is Professor Archibald's exposition of it, in ten pages of notes, and notes on these notes, which is *buried* in an appendix to that rather lop-sided book, Jay Hambidge's *Dynamic Symmetry: The Greek Vase*, (Yale, 1920).

He discusses the three aspects of it: (1) the logarithmic sprial; (2) Euclid's and other geometric studies of "Medial Section," internal and external; and (3) the Fibonacci Series of 1, 2, 3, 5, 8, 13, 21, 34, 55, etc., ever approaching nearer and nearer to the 0.618. . .infinite series of the Golden Mean.

Its basis is economy of material and space and perfection of symmetry, as seen in the Gizeh Pyramids, etc. (The Pyramids use less material and occupy less space than other forms which are less beautiful.) Peas shaken up in a glass jam-pot gradually take a Golden Mean form, just as fir and pine-cones grow that way, or sun-flower heads. Curious it is to find it in planetary distances, as that of Neptune and Uranus, and Mars to the Earth, or the four Galilean Satellites of Jupiter. Many other proportions are halves, as Jupiter to Saturn, and Uranus to Saturn.

Some Golden Means are alternate, as some grasses' inflorescences, as Saturn's satellites, 1 and 3, and 2 and 4, or Uranus' 2 and 3 which are at the Golden Mean proportion.

I believe its use will be found in many fields as in meteorology. Brunt, you remember, found the 33 week period in Greenwich temperatures, and five or more multiples of it; and Shuster's are all multiples of it, in his sun-spot periods (1906). There are 9 or so of Abbot's lengths on page 13 of his *Periodic Solar Variations*, 1955, that are multiples of a 7.6-month period which would be one thirty-sixth of his theoretical 272 month fundamental - which of course is never observed (the sunspot cycle varying so much in range)!

J. H. Douglas Webster

London, England

OCEAN TEMPERATURES

Dear Mr. Dewey:

The Analysis Department of the Naval Ordinance Unit, Key West, Florida, has made an investigation of temperature cycles in sea water in an adjacent area. This investigation covered a period of several years and was restricted to a particular area at sea and a depth of fifty feet. The average temperature for each month during the sixty-three months was obtained. From this data a twelve-month moving average was computed. Next a twenty-one month moving average of the twelve-month moving average was obtained. Data and plots of these averages are enclosed. (*See below.*)

We have observed certain indications of cycles and would like to continue this study further. We are searching for similar studies of ocean temperatures and would appreciate it if you could refer us to any such studies.

We would also appreciate any references you can give us in regard to other cycles of twenty to twenth-three months in length.

Very truly yours,
Viron E. Payne
Head, Data Reduction
Division

U. S. Naval Ordinance Unit
Naval Base
Key West, Florida

In Reply

Dear Doctor Payne:

The oscillations you show are quite regular and average 22 months in length when measured from downward crossing to downward crossing and upward crossing to upward crossing. The troughs are 22 months apart. The crests average 22 3/4 months.

As you well realize, we need many more repetitions before we can determine the typical length of this cycle with accuracy, or even determine that the oscillations are a significant rhythmic cycle.

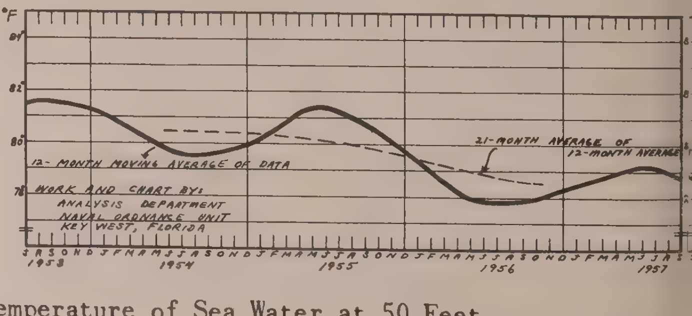
We are in the process of preparing a cyclopedia of cycles. When this is finished, we will be able to answer your questions more completely.

A number of cycles from 20 to 23 months in length have been referred to in *Cycles*, from time to time. Some of these are as follows:

A 21.0-month cycle in the prices of malleable iron pipe fittings.
A 21.6-month cycle in industrial common stock prices.
A 22.7-month cycle in the sales of an industrial company.
A 22.75-month cycle in the solar constant.

What is needed is a much longer series of figures. These will doubtless become available in the course of time.

Cordially yours,
Director



Temperature of Sea Water at 50 Feet.
Key West, Florida.

The Cycle Round-up

OCTOBER.1958

This Round-Up gives the charts of the following series:

Stock Prices
Residential Construction
Corn Prices
Liabilities of Failures
Egg Prices
Copper Prices

Figures for the other series regularly reported in the Round-Up follow:

Aluminum Production

Recent production of domestic primary aluminum has been:

1958 - Apr 125 thousand tons
May 126
Jun not yet available

Automobile Factory Sales

The total factory sales of automobiles during recent months has been:

1958 - May 352 thousand cars
Jun 342
Jul 321 est. production

Bond Yields

These figures are the yields for all domestic corporate bonds as published by Moody's.

1958 - Jun 3.98%
Jul 4.02
Aug 4.14 est.

Oats Prices

In the September issue of *Cycles* we reported on two cycles in the price of oats. When combined the cycles (12- and 26.64-months) reach a low ideally in August of this year.

The price of No. 3 white oats at Chicago recently has been:

1958 - May 63.3 cents per bushel
Jun 64.1
Jul 66.4

Stock Prices

The chart of this series is printed below. The figures are the average monthly index of Combined Stock Prices as prepared by Standard,& Poor's.

1941-43=10
1958 - Jun 44.75
Jul 45.98
Aug 47.60 est.

Sunspot Numbers

Recent monthly sunspot numbers:

1958 - Apr 195
May 175
Jun 168

Unemployment

The precentage of the total labor force that has been unemployed in recent months has been:

1958 - May 7.11 %
Jun 7.72
Jul 7.51

Wheat Prices

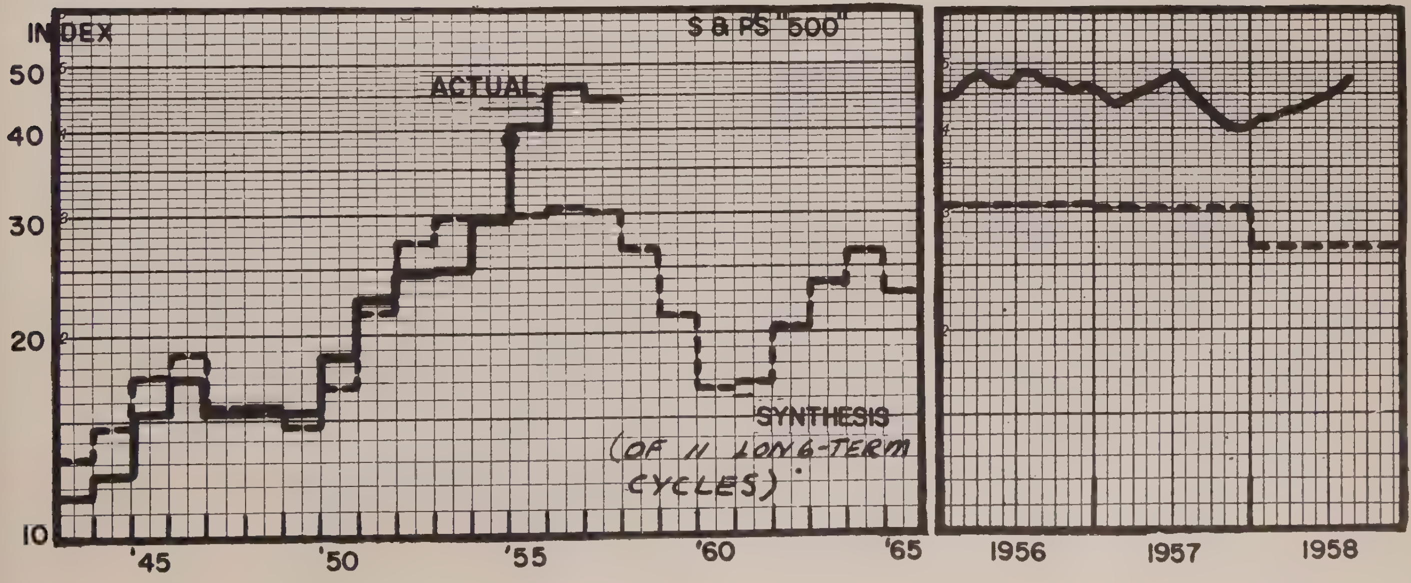
These prices are for No. 1 Dark Northern Spring Wheat at Minneapolis:

1958 - May 243.3 cents per bushel
Jun 247.3
Jul 243.2

It is important to remember that in some cases we are using monthly data in the Round-Up to follow the performance of cycles based on annual data. Only the broad general sweep of the monthly line should be watched.

G. S.

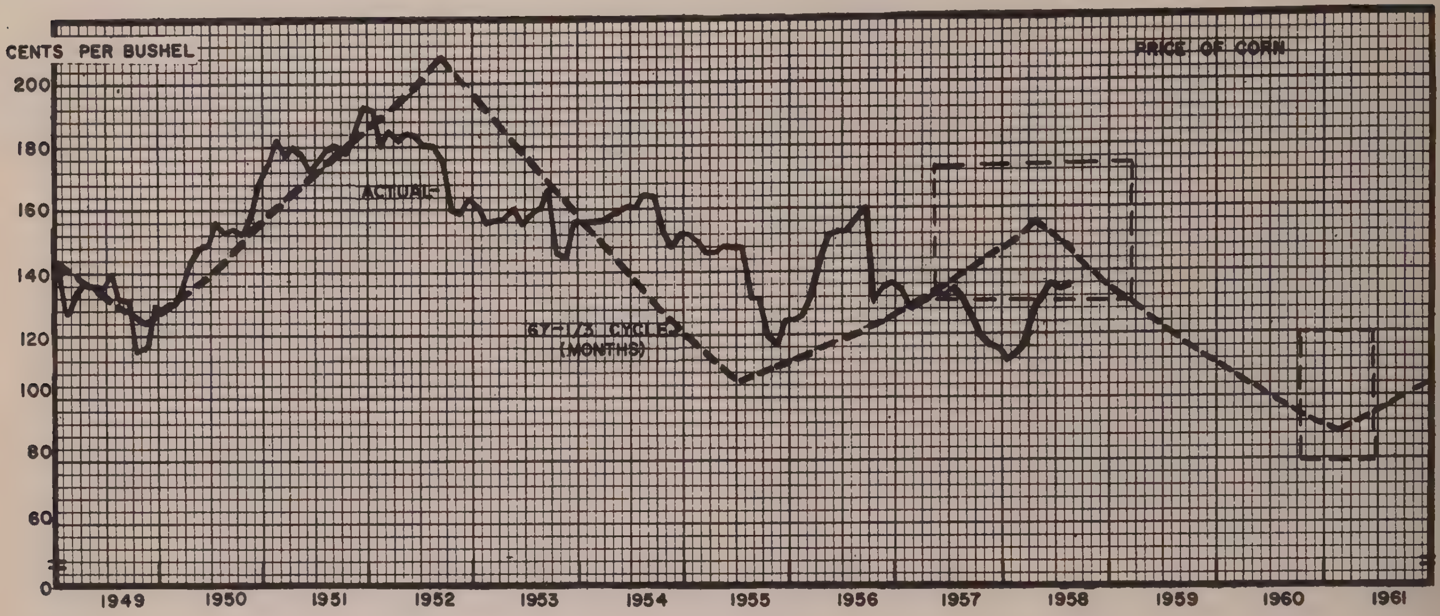
STOCK PRICES



CORN PRICES

The actual price of No. 3 yellow corn at Chicago for recent months has been:

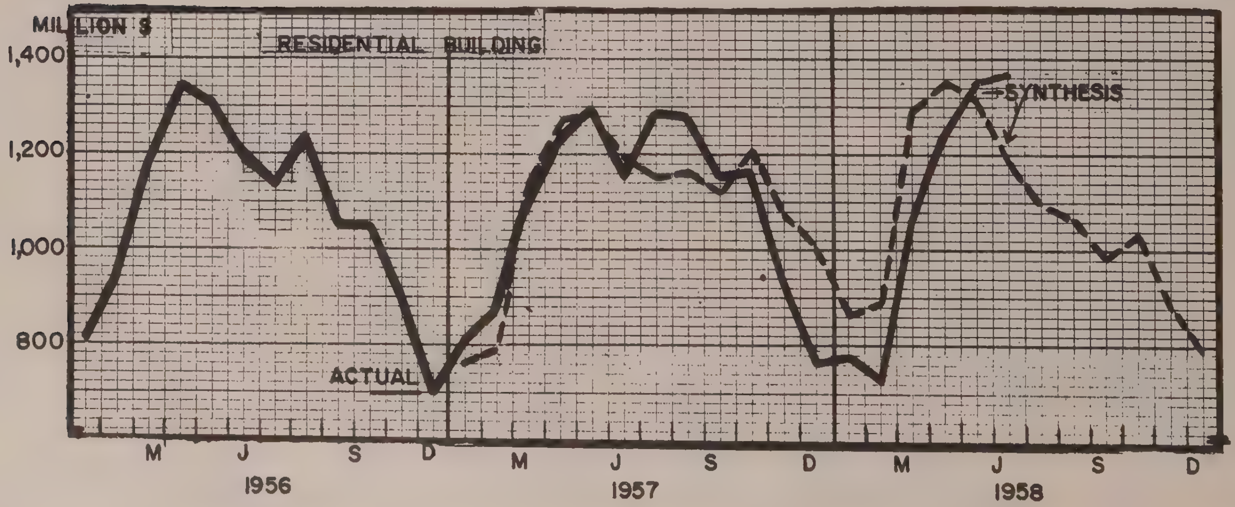
Jun 135.0 cents per bushel
Jul 134.4
Aug 135.0 estimate



RESIDENTIAL BUILDING

Actual Residential construction contracts awarded, as reported by F. W. Dodge in recent months were:

May 1,346 million dollars
Jun 1,364



FAILURES

In 1953 we analysed the total dollar liabilities of commercial and industrial failures and isolated five cycles in them.

The combination of the five cycles (together with an inflation factor and a trend) are going up at the present time. The combination (synthesis) suggests that liabilities in 1958 will be greater than in 1957, and that 1959 will be higher than 1958.

This projection assumes that the cycles we are using are real and will continue to operate, that the trend level we are using is reasonable, and that there is no drastic deflation.

The chart below gives the comparison between the synthesis and actual liabilities by years from 1903 through 1957. The work was based on annual totals.

The right hand portion of the chart keeps the comparison current by showing the monthly figures at an annual rate. Of course the monthly figures will bounce around the average yearly figure.

Liabilities in the first seven months of 1958 total 468 million dollars. Recent actual monthly figures are:

Month	
1958 - May	56 million dollars
Jun	61 " "
Jul	65 " "

The annual total at the rate of the first seven months is 802 million dollars, which would be 30% above the 1957 total of 615 million dollars.

We have been asked why we used the total liabilities figure for our study rather than the liabilities per business establishment.

First, liabilities per establishment would not be meaningful. Second, even if the figure meant anything, there are no currently available figures of number of business establishments. Third, liabilities of failures are well known statistics and are a well recognized inverse measure of business health. Everybody uses them.

In fact, liabilities are one of the "leading indicators" developed by Dr. Geoffrey Moore of the National Bureau of Economic Research. A leading indicator is an economic series which tends to turn ahead of industrial production.

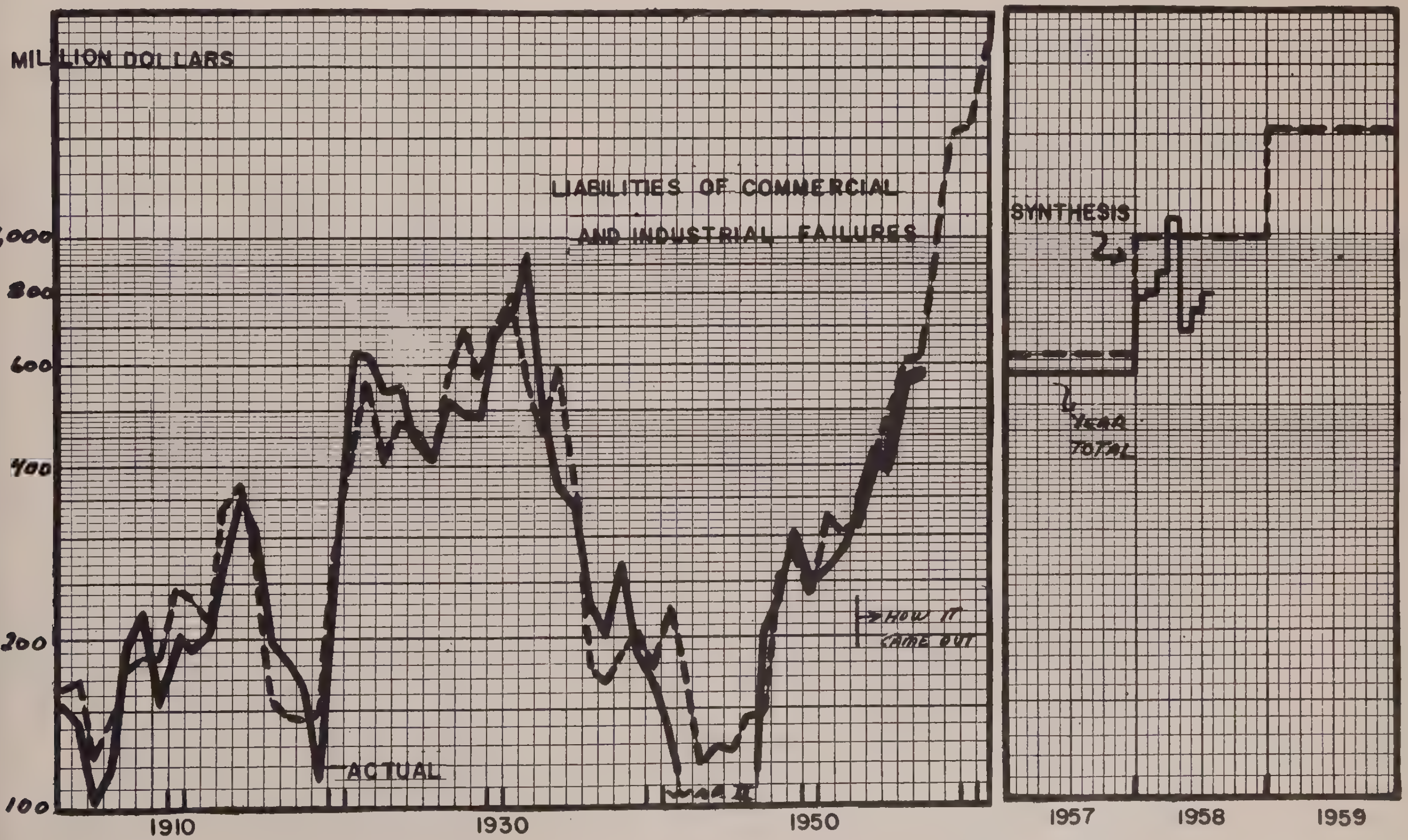
We are temporarily satisfied to have been able to isolate enough cycles in this series to make a worthwhile synthesis.

A summary table on the cycles used follows:

Length in Years	% Above Trend at High	Date of Ideal High
3.42	15.9	1958.98
5.9	12.5	1955.70
6.5	14.3	1961.50
9.2	38.0	1959.50
17.67	51.0	1946.50

For further details regarding the study of cycles in failures refer to "Trend and Cycles of Business Failures," *Cycles*, May 1957, pp. 121-139.

G. S.



EGG PRICES

In addition to showing the current comparison between the actual price of eggs and the synthesis of the two cycles we have isolated in this series, this month we are reprinting the picture of the two component cycles also.

In Figure 1 the actual price of eggs is compared to the combination of the 12-month and the 26.5-month cycles.

The two cycles are shown separately in Figures 2 and 3. In each case the actual cycle (deviations) is the solid line. The *average* actual experience is represented by the ideal cycle which is shown by the broken line,

To all three charts we have added a heavy black line to show how they came out.

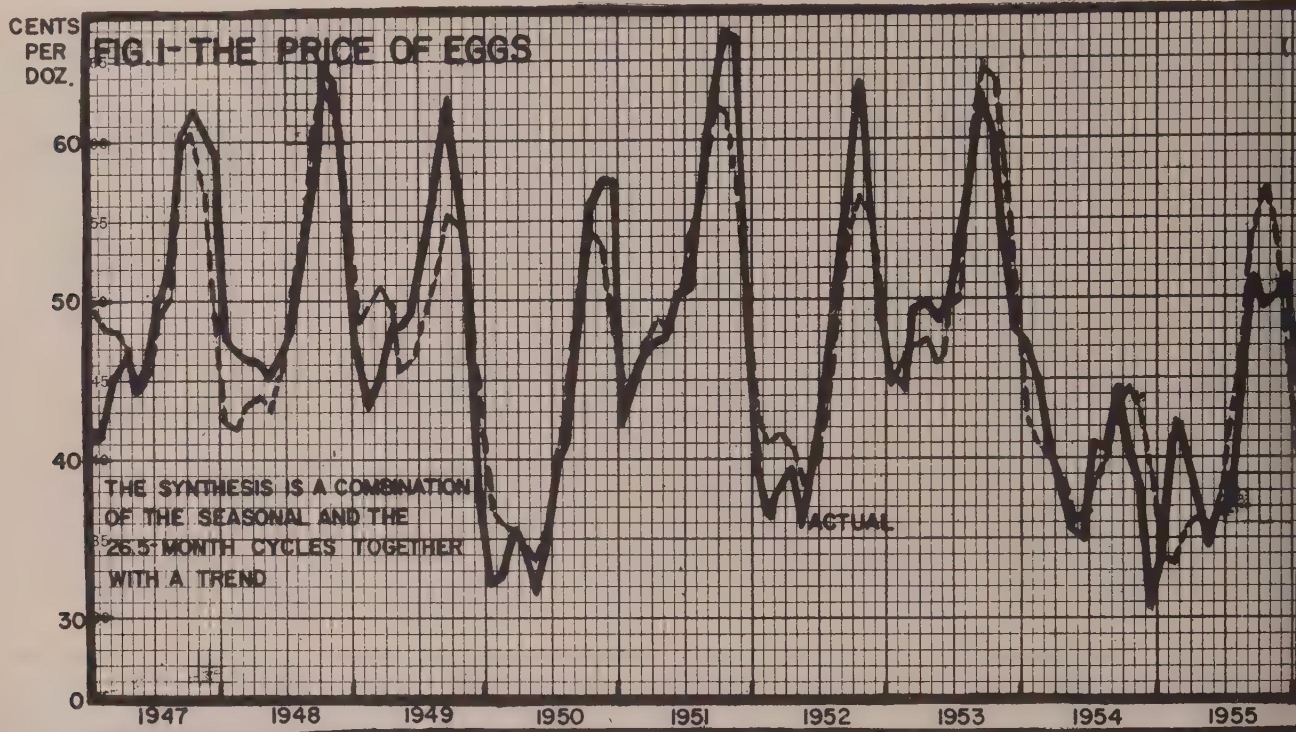


FIG.1 - THE PRICE OF EGGS

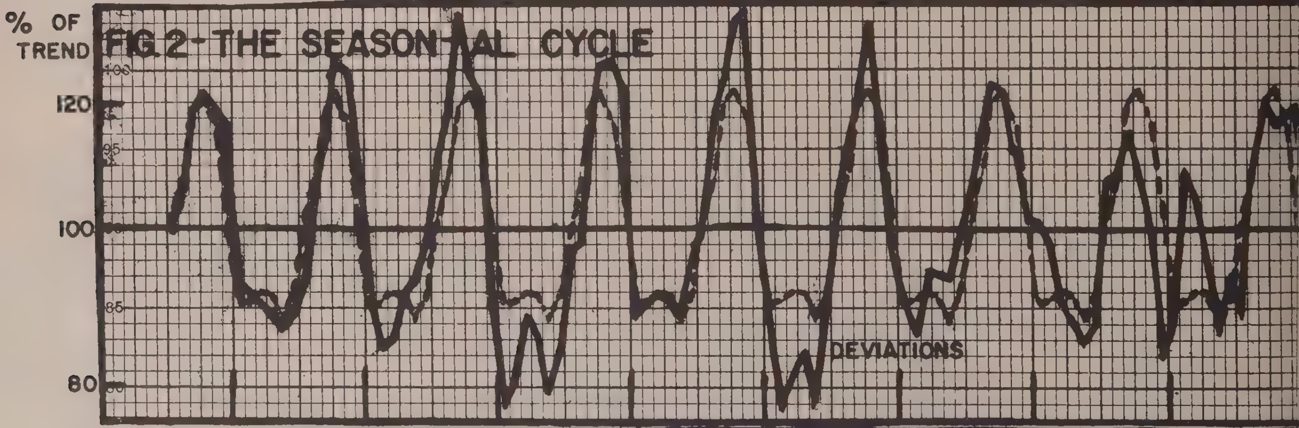


FIG.2 - THE SEASONAL CYCLE

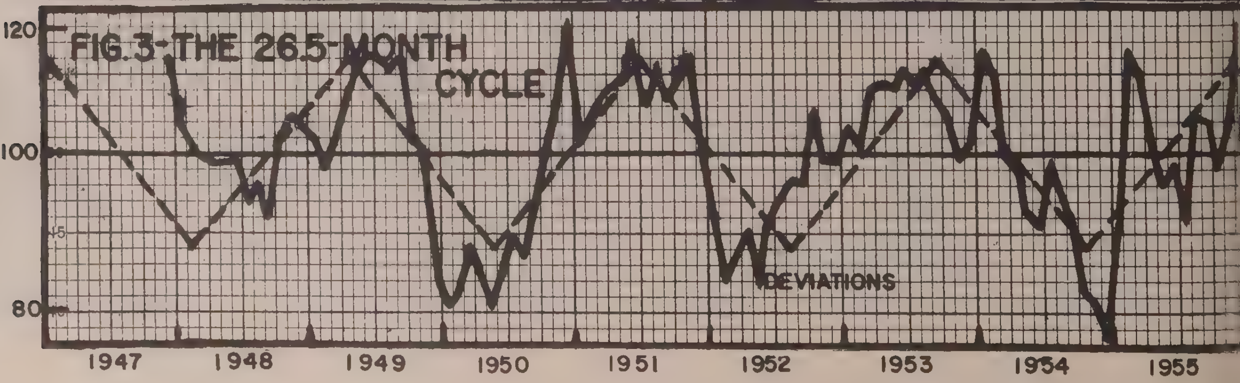
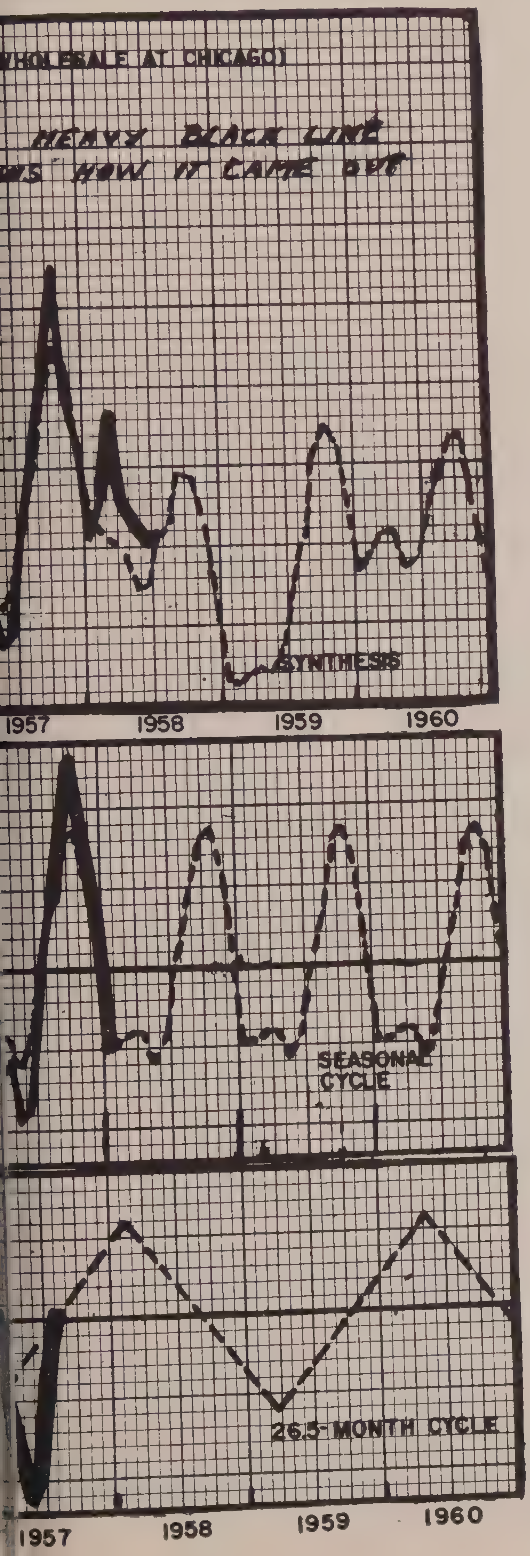


FIG.3 - THE 26.5-MONTH CYCLE

How well the *actual* experience in the future ill correspond to the *average* experience of the ast is anybody's guess. For instance, there are nly eight legs of the 26.5-month cycle in the icture, but all of these have been more or less on the track;" There is no guarantee that this cyle will continue to operate so well in the future.

In July the actual price of eggs, extras, large, holesale at Chicago was 35.7 cents per dozen. his is the delivered price and is not strictly omparable to the previous figures. *G. S.*



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COPPER PRICES

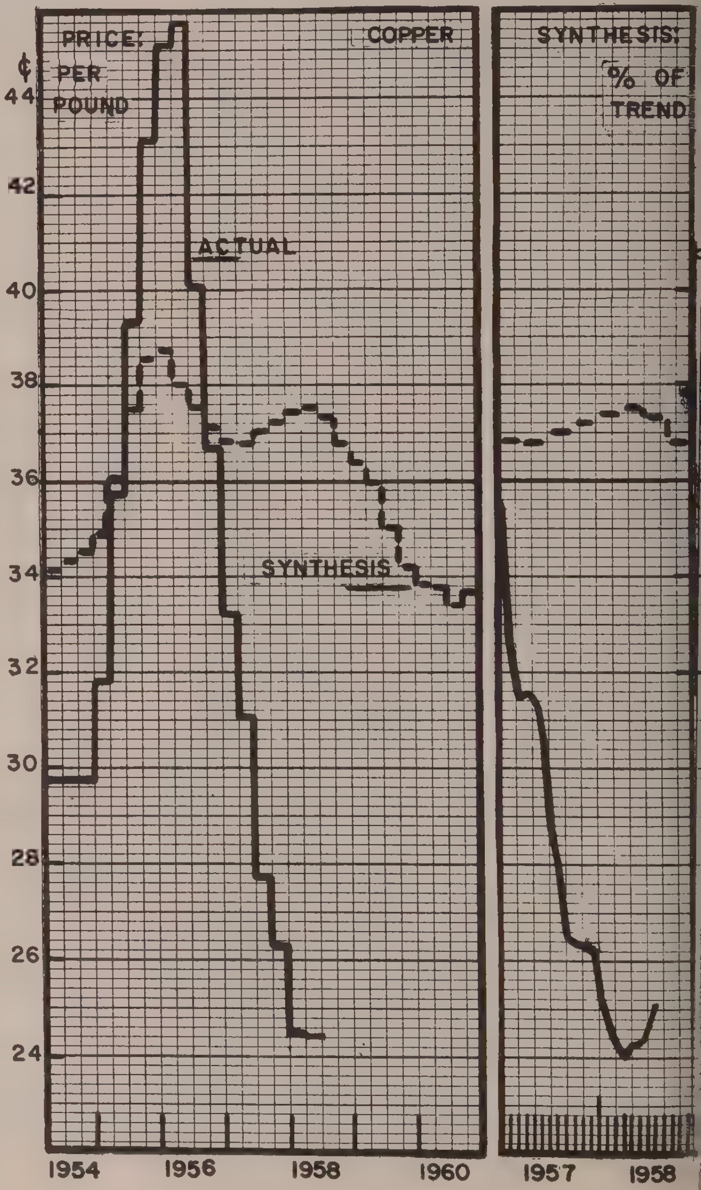
We combined five cycles in the price of copper into a synthesis which is shown on the chart below by the broken line. The actual price of copper (electrolytic bars at New York) is also shown on the chart. All the data are quarterly averages.

This combination of cycles is not a guide for buying copper, and the comparison between the actual price and the synthesis is shown to test whether the cycles are currently dominating the price of copper as they have during so much of the time since 1784.

The actual bottom, which may be in the second quarter of 1958, came later than the ideal bottom. Apparently the next actual top will also come later than the ideal top, as determined in 1954.

The price of copper at New York during the month of July was 25.67 cents per pound.

G. S.



Geisinger Indicator

BACKGROUND

The Modified Geisinger Indicator is a series of numbers which, in the past, have gone up and down ahead of corresponding movements of the Federal Reserve Board Index of Industrial Production. The Modified Geisinger Indicator thus throws some light on the probabilities of the future.

The F. R. B. Index of Industrial Production measures physical production in the U. S. A. It is a weighted average of tons, yards, gallons, and numbers of things produced each month.

The Modified Geisinger Indicator is the sum of two Indicators, the Geisinger Indicator and a First Difference Indicator.

The Geisinger Indicator was invented by Robert Geisinger. It is derived from figures which are published each month in the *Survey of Current Business*. It is charted for you as Curve A on pages 278 and 279.

Curve B on these same two pages charts the First Difference Indicator, which is merely the amount by which the smoothed F. R. B. Index is above or below the value for the preceding month. The smoothing is effected by means of a centered 3-month moving average posted to the second position.

Curve C charts the sum of the values of Curve A and B. This curve is called the Modified Geisinger Indicator. It suggests in a general way what the F. R. B. Index may do some eight months later.

Curve D charts the values of the F. R. B. Index of Industrial Production smoothed.

Curve E re-charts Curve C, advancing it by 8 months. This advance is for two reasons (1) so that you can more easily compare the past behavior of the Modified Geisinger Indicator with the behavior of the F. R. B. Index, and (2) so that you can have a better idea of what the F. R. B. Index may do in the future.

FORECAST

July was the third straight month of increase in the Federal Reserve Board's seasonally adjusted Index of Industrial Production. The July Index was reported to be 133. The Federal Reserve Board revised the June Index from 130 to 131.

Because of revisions in other published source figures the Geisinger Indicator for March 1958 (November 1958 when projected) is revised from -2.4 to -1.0. The preliminary Indicator for April (December 1958 when projected) is -0.40. The upturn in this index is thus sharper than was indicated a month ago.

The preliminary First Difference Indicator for June 1958 (February 1959 when projected) is up to +1.67, which is the highest point for this Indicator since the middle of 1956.

The Geisinger Indicator and the First Difference Indicator are combined to obtain the Modified Geisinger Indicator. The Modified Geisinger Indicator for March 1958 (November 1958 when projected) is revised to -3.33. The preliminary April value is -1.90. The upturn reflects the improvement in both of the component Indicators. Unless published figures are revised further, the worst possible values that can develop for this Indicator are -0.04 for May and +1.27 for June.

The recovery in the basic Geisinger Indicator continues, and for the first time in many months there is the possibility that this Indicator could reach +2.00 or more in the next few months. When and if the Geisinger Indicator reaches 2.00 it will signal a definite upturn. In the meantime the Indicator continues to confirm a halt in the recession.

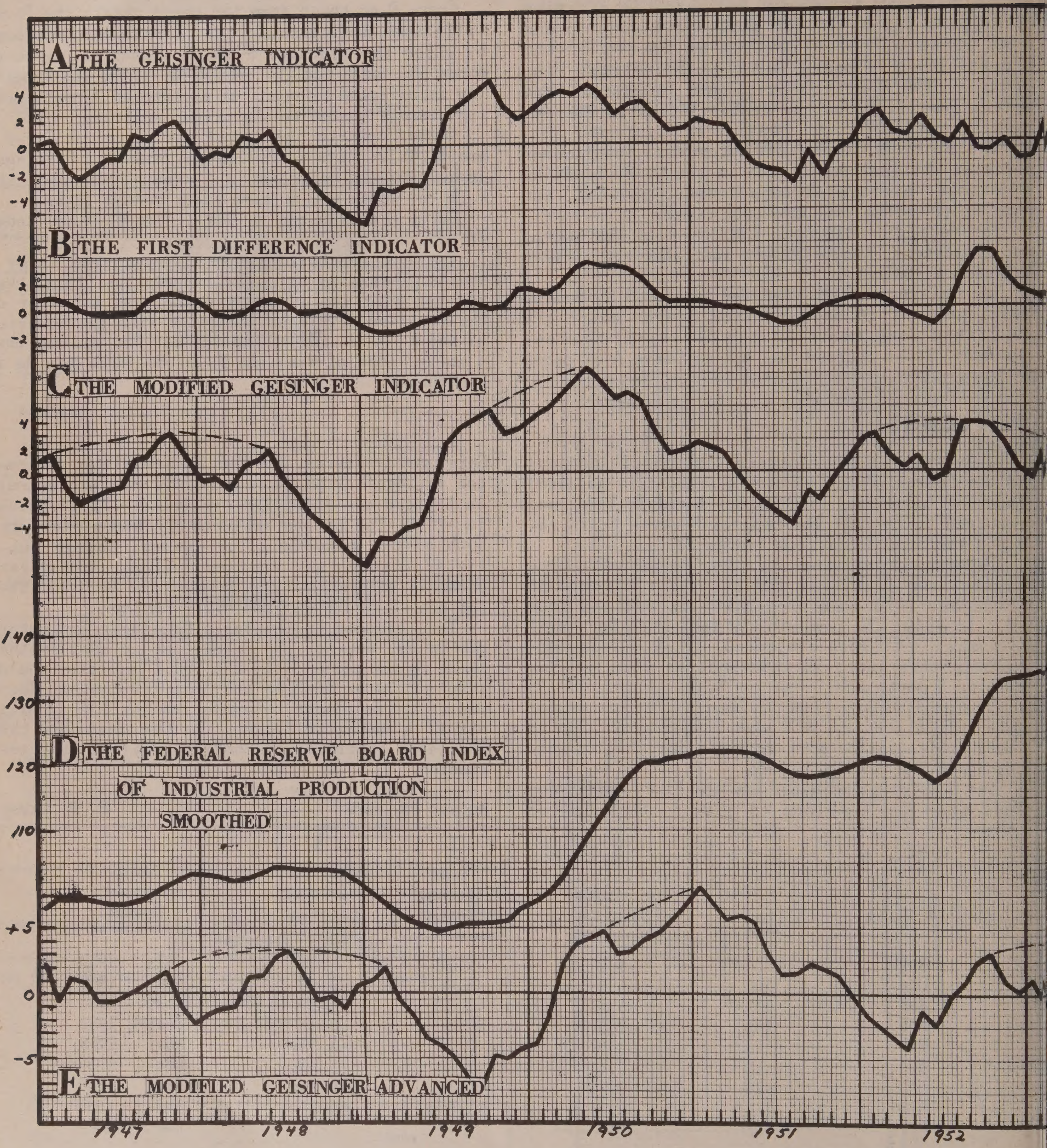
August 28, 1958

E. R. Dewey

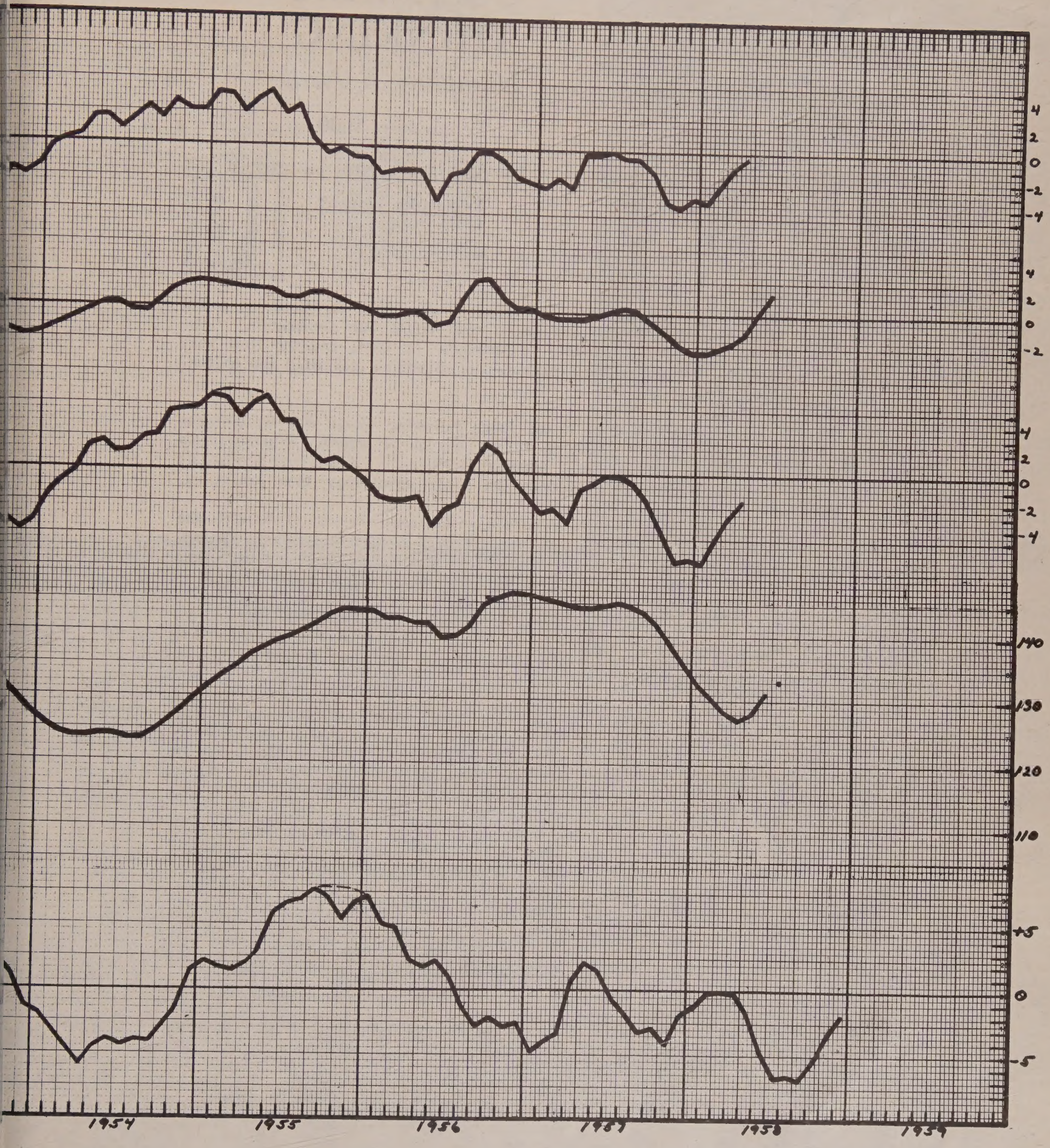
	1	2	3	4	
Month	F.R.B. Index	Geisinger Indicator	First Difference Indicator	Modified Geisinger Indicator	Timing Advanced 8 Months
Nov.	139	-4.2	-2.50	-6.70	July 1958
Dec.	135	-3.6	-3.00	-6.60	Aug. 1958
Jan. 1958	133	-3.8	-3.00	-6.8	Sept. 1958
Feb.	130	-2.6	-2.66	-5.26	Oct. 1958
Mar.	128	-1.0r	-2.33	-3.33r	Nov. 1958
Apr.	126	-0.4	-1.50	-1.90p	Dec. 1958
May	128	-0.2w	+0.16r	-0.04w	Jan. 1959
June	131r	-0.4w	+1.67p	+1.27w	Feb. 1959
July	133p	*	*	*	Mar. 1959

p - preliminary
* - not yet available
w - worst possible
r - revised

THE GEISINGER INDICATOR

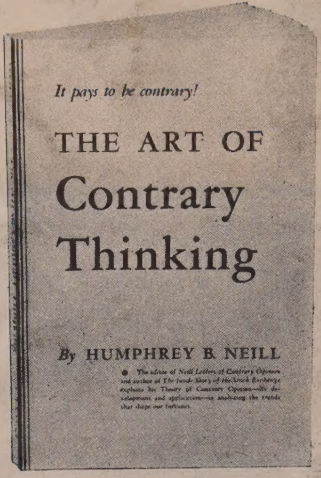


OF INDUSTRIAL PRODUCTION



Turn to page 277 for the forecast.

Mr. H. A. Musham
741 No. Rush St.
Chicago, Ill.



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